The following goals, policies, and actions will provide the framework to assure that implementation of the Chino Airport Master Plan produces the minimum amount of pollutant emissions.

GOALS, POLICIES, AND ACTIONS

GOAL G8-3

General Aviation Emissions.

To encourage the minimum feasible emissions from Chino Airport.

POLICY P8-3.1

Promote Improved Technology.

Support the South Coast Air Quality Management District in promoting the best available technology to reduce emissions in aircraft fleet and ground service vehicles.

ACTION A8-3.1.1

Cleaner Fuels.

Encourage airport service vehicles to use alternate (cleaner) fuels, i.e., electrification.

POLICY P8-3.2

Coordinate Airport Development.

Coordinate airport development to minimize pollutant emission from ground and air transportation systems.

ACTION P8-3.2.1

Airport Transportation Demand Management.

Coordinate airport development to minimize pollutant emission from ground and air transportation systems (i.e., indirect sources) by utilizing Transportation Demand Management (TDM) measures.

Land Use

Introduction

An efficient land use pattern served by a diverse transportation system can minimize air pollutants by minimizing congestion. This means balancing growth. Balanced growth is obtained by equalizing jobs and housing. (i.e., jobs/housing balance).

The purpose of jobs/housing balance is to allow workers to live closer to their jobs, thereby reducing traffic congestion and air pollution problems. However, cities and subregions develop on the fortunes of their constituent industries and supply of affordable housing. To achieve a jobs/housing balance and reduce vehicle miles travelled, growth must be managed. Ensuring the timely provision of infrastructure to serve new development, implementing an economic development strategy, and providing adequate housing for the employment population are essential elements of managing growth and balancing the jobs and housing within the community.

Technical Information

The West San Bernardino Valley subregion is expected to grow by 46.2% in population between 1990 and 2010. This same region will capture 4.7% of the projected regional and 22.9% of the county population growth over the same period.

The City of Chino, which is part of this subregion, is projected to increase in population by 7.5%, from 15,665 to 21,379 dwelling units.

There are approximately 1,088 acres of undeveloped industrial and 738 acres of undeveloped residential property within the City. Based on the growth projected in the West Valley area, residential build out may be accomplished by the year 2010. Industrial development is expected to lag slightly behind.

Employment in San Bernardino County is characterized by 10 main industrial groupings. Retail trade establishments are the largest employers which capture 26.5% of the total employment. Service establishments are the second largest employers and capture 26.5% of total business employment. Overall most businesses are small firms with fewer than 50 employees.

Issues

The socioeconomic background information contained in the San Bernardino County Regional Air Quality Plan projects the City's jobs/housing ratio to be 1.76 jobs per household by the year 2010. It is estimated that the City's existing jobs/housing ratio is 1.42 jobs per household. The existing and projected ratios reflect a community which has an appropriate balance between jobs and housing. Such a balance will certainly contribute to a reduction in air pollutants generated locally if vehicle miles travelled can be reduced.

It will be most difficult to achieve this balance without an exhaustive planning effort. Several factors will inhibit the City's ability to achieve the projected jobs/housing balance and desired reduction in vehicle miles travelled. First, Measure "M", effective

in 1988, fixes the housing supply making affordable housing programs difficult to implement. Second, the City does not currently have an economic development strategy to attract business and industry which fit the existing labor pool. Third, the City does not have a Capital Improvement Plan (CIP) consistent with state requirements which works to balance jobs/housing, or consider the timely provision of infrastructure to housing and employment sectors.

The following goals, policies, and actions will aid the City in improving air quality by promoting jobs/housing balance for the purpose of reducing vehicle miles travelled.

GOALS, POLICIES, AND ACTIONS

GOAL G8-4

Efficient Land Use Pattern.
To achieve a pattern of land uses which can be efficiently served by a diversified transportation system and development projects which directly and indirectly generate the minimum feasible air pollutants.

POLICY P8-4.1

Manage Growth.
Continue to ensure that the fundamental City documents, including the General Plan, achieves a community which is efficiently balanced in terms of jobs/housing and which adequately prepares for management of growth.

ACTION A8-4.1.1

Capital Improvement Plan.
Prepare and annually update a Capital Improvement Plan (CIP) to include state mandated air quality requirements.

ACTION A8-4.1.2

Economic Development Strategy.
Complete the preparation of an economic development strategy which examines the available labor pool and targets/markets the City to those industries/ businesses who best fit the labor pool characteristics.

ACTION A8-4.1.3

Coordinate Regional Job/Housing Balance.
Participate in the preparation of a Memorandum of Understanding (MOU) between participating jurisdictions in the Regional Air Quality Element (RAQE) as to mutually acceptable approoches to improve and maintain the jobs/housing balance in the West Valley area. (AQMP Control Measure No. 17.)

POLICY P8-4.2

Jobs/Housing Balance.
Create and execute programs which control and manage the balance between jobs and housing.

ACTION A8-4.2.1

Project Impacts.
Adopt an ordinance to establish criteria to assess the impacts of development projects upon air quality in terms of such factors as jobs created, traffic generated (by type), and direct/indirect pollutant emissions for certain size development.

ACTION A8-4.2.2

Draw From City Labor Pool.

Assess the feasibility of requiring businesses to employ a portion of its labor force from within the City or close proximity to the City.

ACTION A8-4.2.3

Growth Management Plan Performance.

Amend the Land Use Element to attain jobs/housing balance performance goals including jobs/housing targets by year, at a sub-regional level consistent with the Growth Management Plan (GMP). Prepare bi-annual assessment of the City's status in attaining its jobs/housing balance goals. (AQMP Control Measure No. 17.)

ACTION A8-4.2.4

New Jobs/Backbone Infrastructure.

Include in the City's C.I.P. a provision to provide backbone infrastructure to areas within the City where new jobs could be created which best fit the City's labor pools characteristics.

ACTION A8-4.2.5

Mixed Use Development.

Examine the feasibility of preparing a zoning ordinance amendment requiring mixed use development within the parameters established by Measure "M" in certain commercial zones.

POLICY P8-4.3

Protect Sensitive Receptors.

Protect sensitive receptors (schools, parks, hospitals) by supporting a regional approach to regulating the location and design of land uses which are especially sensitive to air pollution.

ACTION A8-4.3.1

Locational Requirements for Sensitive Receptors.

Prepare a zoning ordinance amendment which formulates standards for regulating the location and protection of sensitive receptors (such as schools, parks, hospitals, churches, etc.) from air pollutant emissions.

Particulate Emissions

Introduction

Particulate matter, or suspended particulates are solid and liquid particles of dust, soot, aerosol and other matter which are small enough to remain suspended in the air for a long period of time. A portion of the total particulate matter is caused by natural sources such as wind-blown dust and pollen. Man made sources include auto combustion, agriculture, factories, construction activity and roads (especially unpaved roads).

The City is transitioning from a primarily agricultural to urbanized community. While some agricultural activities currently operate within the City, the community make-up is predominately urban. Urban activities are the primary sources of particulate matter within Chino.

Technical Information

The primary source of particulate matter within Chino is from construction activity. The projected growth in this region and the amount of undeveloped land make construction activity the number one generator.

The adjacent San Bernardino County Dairy Preserve and agricultural activities located within the southern portion of the City, also generate particulate matter. It is expected that dust particles from agricultural uses within the City will diminish over time. However, impacts from the San Bernardino County Dairy Preserve and California Institution for Men will continue.

In the urbanized portion of the City, dust is generated from curbs and gutters, unpaved road shoulders, and parking lots. Presently, street sweepers clean each street 26 times annually. This totals approximately 4,160 miles of roadway per year. Statistics collected during the development of the San Bernardino County Regional Air Quality Plan show Chino's street sweeping program to be one of the most ambitious.

Issues

As the City continues to develop, construction activity will continue to produce particulates which will impact air quality. The current street sweeping program is adequate to mitigate impacts from streets, roads, natural sources, parking lots and agricultural uses. The primary issue will be to control particulate matter during new construction and on unpaved roads and lots.

The following goals, policies, and actions will aid the City in reducing air born particulates from activity within the City, including construction activity.

GOALS, POLICIES, AND ACTIONS

GOAL G8-5

Reduce Particulate Emissions.

Reduce to a minimum particulate emissions from such uses as construction, operation of roads, and buildings.

POLICY P8-5.1

Control Dust.

Reduce particulate emissions from roads, parking lots, construction sites and agricultural lands.

ACTION A8-5.1.1

Street Sweeping.

Continue to sweep City streets approximately twice per month. (AQMP Control Measure No. 12.a.)

ACTION A8-5.1.2

Control Particulate Emissions from Unpaved Roads.

Adopt an ordinance amendment to control particulate emissions created from unpaved roads, drives, vehicle maneuvering areas, parking lots, and vacant lots in conformance with the criteria established by the Air Resources Board. (AQMP Control Measure No. 12.b.)

ACTION A8-5.1.3

Limit Dust.

Adopt an ordinance amendment to control dust from vacant lands and operations and erosions from storm water washing into streets. (AQMP Control Measure No. 12.a.)

ACTION A8-5.1.4

Storage of Particulate Matter.

Eliminate the outdoor storage of sand, gravel and other particulate matter which is left uncovered or not confined at City facilities. (AQMP Control Measure No. 12.a.)

POLICY P8-5.2

Reduce Emissions from Building Materials and Methods of Construction.

Reduce emissions from building materials and methods of construction which generate excessive pollutants.

ACTION A8-5.2.1

Control Emissions, Construction, and Demolition.

Adopt an ordinance requiring the control of particulate emissions from construction and demolition activities and on-site construction traffic flow by requiring such things as truck wheel washers and paving of access roads. (AQMP Control Measure No. 12.a.)

ACTION A8-5.2.2

Particulate Emissions from Truck Hauling.

Require the installation of liners on truck beds, truck loads to be covered, and maintain freeboard levels for trucks use in construction activities. Establish penalties for commercial vehicles which are not in compliance. (AQMP Control Measure No. 12.a.)

POLICY P8-5.3

Reduce Emissions from Building Interiors.

To reduce interior air pollutants which produce poor air quality within building interiors.

Note: No Actions approved at this time. Actions might be added at a later date.

Energy Conservation

Introduction

Energy use contributes significantly to pollutant emissions, as well as gases that effect global warming. In 1987, approximately 80% of all emissions were related to energy use.

As population growth continues, it is imperative to advocate the efficient use of energy. It is also important to reduce the use of energy and encourage alternative energy sources.

Technical Information

The South Coast Air Quality Management District's 1991 Air Quality Management Plan requires local government to reduce its energy demand by 8% by January 1, 1994, 15% by 2000, and 30% by 2010. A recent League of California Cities' survey revealed that nearly 40% of responding cities have no organized energy management programs. The City of Chino is no exception.

Conservation measures involving building operation improvements, such as lighting, building area and boiler efficiency improvements, can lead to a significant reduction in energy consumption. Other areas where energy conservation can be achieved are: heating, ventilation and air conditioning (HVAC) system modifications, electrical use from space heating and cooling, food preparation, and energy efficient lighting in a variety of commercial and industrial facilities and residential homes. Additionally, industrial facilities use electricity in the manufacturing process for activities such as hydraulic pumping, air movement systems, electroplating, metal melting, drying and curing processes, and electric motor operation.

The use of cleaner types of energy is also an important aspect of reducing pollutant emissions. Electricity, ethanol, geothermal, LPG, methanol, natural gas, solar, and wind are considered clean fuels. The AQMP assumes that fuels which are cleaner and/or more efficient will be used, where appropriate, as an alternative to the high polluting fuels currently being used.

Issue

The primary issue with carrying out energy conservation actions is generating the initial capital for their creation and taking the necessary actions to implement them.

The following goals policies and actions will aid the City in conserving energy and reducing pollutant emissions which contribute to global warming.

GOALS, POLICIES, AND ACTIONS

GOAL G8-6

Reduce Energy Consumption.

To reduce emissions through reduced energy consumption.

POLICY P8-6.1

Energy Conservation.
Reduce energy consumption through energy conservation improvements and requirements.

ACTION A8-6.1.1

Energy Conservation Plan.
Develop a 5-year energy conservation plan which describes improvements to City buildings which will conserve energy or convert to cleaner fuels and include implementation of this plan in the City's annual budget.

ACTION A8-6.1.2

Energy Conservation Requirements.
Adopt an ordinance creating a program of local administrative practices to reduce local government energy demand 8% by January 1, 1994; 15% by the year 2000, and; 30% by the year 2010. (AQMP Control Measure No. 18.a.)

POLICY P8-6.2

Limit Water Heater Emissions.
To reduce emissions resulting from swimming pool water heaters and residential and commercial water heaters.

ACTION A8-6.2.1

Emission Reduction from Pool Heaters.
Adopt a regulation requiring an emission reduction from swimming pool water heaters. (AQMP Control Measure No. 18.a.)

ACTION A8-6.2.2

Emission Reduction From Water Heaters.
Adopt a regulation to require an emission reduction from residential and commercial water heaters. (AQMP Control Measure No. 18.a.)

POLICY P8-6.3

Recycle Wastes.
Promote local recycling of wastes and use of recycled materials.

ACTION A8-6.3.1

Waste Recycling.
Adopt a Source Reduction and Recycling Element to divert 25% of local solid waste requiring disposal by the year 1995 and 50% by the year 2000.

Implementation Strategy

Everyone wants cleaner air, a better place to live and work, and a healthy environment. The problem, however, as it relates to air quality, is that it will require a significant commitment by local government, business, and area residents to obtain cleaner air. The commitment comes in the form of modification to one's lifestyle. This type of change has the potential to be overwhelming.

The South Coast Air Quality Management District - Air Quality Management Plan, (and the control measures it contains) may appear overwhelming to area residents, business, and municipal government. The control measures noted in Appendix "A" of this document, in effect, ask local governments to use their land use regulatory powers to encourage the lifestyle change to obtain Federal air standards.

To successfully achieve the prescribed federal air quality standards, the City, local businesses, employees, and residents will all need to play a role in implementing these actions. The role of each party is separate and distinct but critical to our region being successful in this endeavor. The following are examples of the roles each of these parties may be asked to participate in.

City

Prepare an Air Quality Element; educate local businesses and residents about air quality issues; become a partner with local businesses and area residents to improve air quality within the air basin; require its employees to rideshare; buy fuel efficient fleet vehicles; save energy in City buildings; lobby other jurisdictions to do their fair share in improving air quality in the basin, etc.

Local Business

Work with the City in a partnership role to implement the various actions within this element; educate employees about how they can affect air quality; try to hire local residents; create flexible work hours for employees; encourage employees to rideshare; where feasible, permit telecommuting; schedule truck deliveries in off-peak hours; assist in establishing and/or participate in a Transportation Management Association; and provide showers and lockers for employees who bike or walk to work, etc.

Local Residents

Educate themselves about how they can affect air quality; become ridesharers, walk or bike to local activities within the City; plan their non-work trips so they are efficient; become familiar with and use local transit; when considering a job change, look for employment close to home; support the City and local business efforts to improve air quality, etc.

Recognizing the commitment and resources needed to accomplish such a change, and the inevitable impacts facing the people who will make that first commitment. The following guidelines are included to assist City Departments in implementing the Air Quality Element actions.

Guidelines for the City's Implementation of the Air Quality Element actions:

1. In all applicable cases, actions shall be implemented by utilizing market incentives available to the City or business community to encourage compliance with specific activities. If a market incentive approach fails to yield the desired air quality benefit, a direct regulatory approach shall be pursued, as a last resort.

2. The City shall form a partnership with businesses and area residents to achieve the goal of cleaner air through cooperation, sharing of available resources, and creative solutions to action implementation.

3. The City shall function, to the maximum extent possible, as a liaison between the business community, South Coast Air Quality Management District, other air quality planning agencies, and agencies with funding sources in order to facilitate action implementation. This role may include examining funding sources, establishing incentives, providing information, and consulting area residents.

The City is committed to achieving the air quality improvements set forth in the South Coast Air Quality Management District's Air Quality Management Plan. However, the City realizes that achieving such a goal may have a burden on businesses and residents. The aforementioned implementation guidelines will assist the City in achieving district requirements while sharing the responsibility with area residents and local business/industry.

Implementation

- Government Organization, Roles and Repsonsibilities
- Ground Transportation
- Air Transportation
- Land Use
- Particulate Emissions
- Energy Conservation

AIR QUALITY ELEMENT IMPLEMENTATION

GOVERNMENT ORGANIZATION, ROLES AND RESPONSIBILITIES

ACTIONS	GOALS AND POLICIES				RESPONSIBLE AGENCY / DEPARTMENT *									TIMING
	Goal G8-1 Air Quality Improvement				CD	PW	CS	MS	PD	FD	A	SBC	Other (specify)	
	P8-1.1	P8-1.2	P8-1.3											
Coordinated Review. Action A8-1.1.1	X				X									On-going
AQMP Regional Financing. Action A8-1.1.2	X				X						X			On-going
Local Input. Action A8-1.1.3	X				X									1991
Implement Congestion Management Plan. Action A8-1.2.1		X				X								1992
Establish Regional Transportation Management Agencies. Action A8-1.2.2		X				X					X			On-going
OmniTrans/RTD - Transit Improvements. Action A8-1.2.3 (AQMP Cntl Measure No. 2.a.)		X				X					X			On-going
Communication Network. Action A8-1.3.1			X								X			On-going
Lobby Other Entities to Implement AQMP. Action A8-1.3.2			X								X			On-going

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AIR QUALITY ELEMENT IMPLEMENTATION

GOVERNMENT ORGANIZATION, ROLES AND RESPONSIBILITIES

ACTIONS	GOALS AND POLICIES				RESPONSIBLE AGENCY / DEPARTMENT *									TIMING
	Goal G8-1 Air Quality Improvement				CD	PW	CS	MS	PD	FD	A	SBC	Other (specify)	
	P8-1.4	P8-1.5												
Public Participation Programs. Action A8-1.4.1	X				X						X			On-going
Educate Local Businesses. Action A8-1.4.2	X				X						X			1992
Obtaining Public Input. Action A8-1.4.3	X				X									On-going
Homeowner's Association/Neighborhood Groups. Action A8-1.4.4	X				X						X			1992
Tier III Implementation. Action A8-1.5.1		X			X						X			On-going
Encourage Business/Research. Action A8-1.5.2		X			X						X			On-going
Support Creative Solutions. Action A8-1.5.3		X			X						X			On-going
Regional Cooperation. Action A8-1.5.4		X									X			On-going

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AIR QUALITY ELEMENT IMPLEMENTATION

GROUND TRANSPORTATION

ACTIONS	GOALS AND POLICIES				RESPONSIBLE AGENCY / DEPARTMENT *									TIMING
	Goal G8-2		Ground Transportation		CD	PW	CS	MS	PD	FD	A	SBC	Other (specify)	
	P8-2.1	P8-2.2												
Neighborhood Services. Action A8-2.1.1	X				X									1993
On-Site Services. Action A8-2.1.2	X										X			1994 *
Trip Reduction Ordinance. Action A8-2.1.3 (AQMP Cntl Measure No. 1.a. & 1.b.)	X					X								1994 *
Compliance with SCAQMD AVR. Action A8-2.1.4 (AQMP Cntl Measure No. 2.a.)	X				X						X			1994/1995
Reduced Service During Stage 3 Smog Alerts. Action A8-2.1.5	X										X			1991 *
Trip Reduction Program. Action A8-2.1.6 (AQMP Cntl Measure No. 1.a. & 1.b.)	X										X			1994 *
Travel Demand Management Action A8-2.2.1 (AQMP Cntl Measure No. 2.b.)		X			X									1994 *

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AIR QUALITY ELEMENT IMPLEMENTATION

GROUND TRANSPORTATION

ACTIONS	GOALS AND POLICIES				RESPONSIBLE AGENCY / DEPARTMENT *									TIMING
	Goal G8-2 Ground Transportation				CD	PW	CS	MS	PD	FD	A	SBC	Other (specify)	
	P8-2.3	P8-2.4	P8-2.5											
Congestion Management Plan. Action A8-2.3.1	X					X								1992
Adopt CMP Ordinance. Action A8-2.3.2	X					X								1992
Truck Routing/Deliveries. Action A8-2.3.3 (AQMP Cntl Measure No. 3.a.)	X					X								1994
Restrict Trucks from Major Arterials. Action A8-2.3.4 (AQMP Cntl Measure No. 3.a.)	X					X								1994
Traffic Signal Improvements. Action A8-2.3.5 (AQMP Cntl Measure No. 4.)	X					X								1995
On-Street Parking During Peak Hours. Action A8-2.3.6 (AQMP Cntl Measure No. 2.b. & 4.)	X					X								1994
Surcharge for Truck Operations During Peak Periods. Action A8-2.3.7 (AQMP Cntl Measure No. 3.a.)	X					X					X			1994
(Note: Future actions may be included under this policy if fees are determined to be needed for implementation of other Air Quality actions.)		X												
Sub-Regional Transportation System. Action A8-2.5.1			X								X			1992
Auto Use Restrictions. Action A8-2.5.2 (AQMP Cntl Measure No. 2.e.)			X			X								1992
City Shuttle. Action A8-2.5.3			X								X			1994

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AIR QUALITY ELEMENT IMPLEMENTATION

GROUND TRANSPORTATION

ACTIONS	GOALS AND POLICIES					RESPONSIBLE AGENCY / DEPARTMENT *									TIMING
	Goal G8-2 Ground Transportation					CD	PW	CS	MS	PD	FD	A	SBC	Other (specify)	
	P8-2.6	P8-2.7	P8-2.8	P8-2.9	P8-2.10										
Bike Trails. Action A8-2.6.1 (AQMP Cntl Measure No. 1.b.)	X					X		X							On-going
Merchant Transportation Incentives. Action A8-2.6.2 (AQMP Cntl Measure No. 2.d.)	X					X	X					X			1994
Bicycle Parking and Showers. Action A8-2.6.3 (AQMP Cntl Measure No. 1.b.)	X					X						X			1999
Rideshare Incentives in Public Parking Lots. Action A8-2.7.1 (AQMP Cntl Measure No. 2.b.)		X				X						X			1994
Limit Parking Supply by Zone. Action A8-2.7.2 (AQMP Cntl Measure No. 2.b.)		X				X	X								1994
Preferential Parking for Ridesharers. Action A8-2.7.3 (AQMP Cntl Measure No. 2.b.)		X				X	X								1992
Parking Cost Standards. Action A8-2.8.1 (AQMP Cntl Measure No. 2.b.)			X			X						X			1992
Emission Fee. Action A8-2.9.1				X		X						X			1994
Emission Surcharge. Action A8-2.9.2				X		X						X			1995
Support Tax Credit/Tax Benefit. Action A8-2.9.3				X								X			1995
Clean Fuel Electric Vehicles. Action A8-2.10.1					X		X					X			On-going 2000, 2010
MPG Purchase Limitation. Action A8-2.10.2					X	X				X		X			1992

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AIR QUALITY ELEMENT IMPLEMENTATION

AIR TRANSPORTATION

ACTIONS	GOALS AND POLICIES				RESPONSIBLE AGENCY / DEPARTMENT *									TIMING
	Goal G8-3 General Aviation Emissions				CD	PW	CS	MS	PD	FD	A	SBC	Other (specify)	
	P8-3.1	P8-3.2												
Cleaner Fuels. Action A8-3.1.1	X					X						X		1992
Airport Transportation Demand Management. Action A8-3.2.1		X			X	X						X		1992

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AIR QUALITY ELEMENT IMPLEMENTATION

LAND USE

ACTIONS	GOALS AND POLICIES				RESPONSIBLE AGENCY / DEPARTMENT *									TIMING
	Goal G8-4 Efficient Land Use Pattern				CD	PW	CS	MS	PD	FD	A	SBC	Other (specify)	
	P8-4.1	P8-4.2	P8-4.3											
Capital Improvement Plan. Action A8-4.1.1	X				X	X								1992
Economic Development Strategy. Action A8-4.1.2	X				X									1992
Coordinate Regional Jobs/Housing Balance. Action A8-4.1.3 (AQMP Cntl Measure No. 17.)	X				X									On-going/ 1992
Project Impacts. Action A8-4.2.1		X			X									1992
Draw From City Labor Pool. Action A8-4.2.2		X			X									1993
Growth Management Plan Performance. Action A8-4.2.3 (AQMP Cntl Measure No. 17.)		X			X			X			X			On-going/ 1994
New Jobs/Backbone Infrastructure. Action A8-4.2.4		X			X									1992
Mixed Use Development. Action A8-4.2.5 (AQMP Cntl Measure No. 1.b.)		X			X	X								1994
Locational Requirements for Sensitive Receptors. Action A8-4.3.1			X		X									1994

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AIR QUALITY ELEMENT IMPLEMENTATION

PARTICULATE EMISSIONS

ACTIONS	GOALS AND POLICIES				RESPONSIBLE AGENCY / DEPARTMENT *									TIMING
	Goal G8-5 Reduce Particulate Emissions.				CD	PW	CS	MS	PD	FD	A	SBC	Other (specify)	
	P8-5.1	P8-5.2	P8-5.3											
Street Sweeping. Action A8-5.1.1 (AQMP Cntl Measure No. 12.a.)	X					X								On-going
Control Particulate Emissions from Unpaved Roads. Action A8-5.1.2 (AQMP Cntl Measure No. 12.b.)	X					X								1994
Limit Dust. Action A8-5.1.3 (AQMP Cntl Measure No. 12.a.)	X				X	X								1994
Storage of Particulate Matter. Action A8-5.1.4 (AQMP Cntl Measure No. 12.a.)	X					X	X							1994
Control Emissions, Construction, and Demolition. Action A8-5.2.1 (AQMP Cntl Measure No. 12.a.)		X			X									1994
Particulate Emissions from Truck Hauling. Action A8-5.2.2 (AQMP Cntl Measure No. 12.a.)		X			X	X								1994
Note: No Actions approved at this time. Actions might be added at a later date.			X											

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AIR QUALITY ELEMENT IMPLEMENTATION

ENERGY CONSERVATION

ACTIONS	GOALS AND POLICIES				RESPONSIBLE AGENCY / DEPARTMENT *									TIMING
	Goal G8-6 Energy Consumption.				CD	PW	CS	MS	PD	FD	A	SBC	Other (specify)	
	P8-6.1	P8-6.2	P8-6.3											
Energy Conservation Plan. Action A8-6.1.1	X						X							1994
Energy Conservation Requirements. Action A8-6.1.2 (AQMP Cntl Measure No. 18.a.)	X						X				X			1994
Emission Reduction from Pool Heaters. Action A8-6.2.1 (AQMP Cntl Measure No. 18.a.)		X			X									1999
Emission Reduction from Water Heaters. Action A8-6.2.2 (AQMP Cntl Measure No. 18.a.)		X			X									2006
Waste Recycling. Action A8-6.3.1			X								X			1993

* CD - Community Development Department
PW - Public Works Department
CS - Community Services Department
MS - Management Services Department
PD - Police Department
FD - Chino Valley Fire District
A - Administration
SBC - San Bernardino County

Glossary

Air Quality Management Plan (AQMP)
A comprehensive policy document that delineates goals, policies, pollution reduction strategies, and implementation responsibilities for improving air quality in the South Coast Air Basin.

Air Resources Board (ARB)
The State Agency which prepares and submits the State Implementation Plan (SIP) to the Environmental Protection Agency (EPA). The ARB is also the agency that reviews regional plans to ensure that Transportation Control Measures are taken to achieve air quality standards at the earliest practicable date. This Agency establishes emissions standards for mobile sources.

Average Vehicle Ridership (AVR)
The average amount of occupants for a vehicle over a period of time.

Basic Transportation Airport
An airport which primarily services aircraft for commercial and recreational use. Generally, commuter, local and itinerant aircraft visit such airports. Air carrier aircraft usually do not have access to Basic Transportation Airports.

California Clean Air Act (CCAA)
The State Legislation which requires all non-attainment air basins to develop new attainment plans to meet Federal and State air quality standards.

California Environmental Quality Act (CEQA)
State legislation which requires all governmental agencies at all levels to document and consider the environmental considerations of their actions.

CalTrans
State of California Department of Transportation (CalTrans) is the State Agency which oversees the State network of roadways and highways.

Carbon Monoxide (C_o)
A colorless, odorless gas formed by the incomplete combustion of fuels. Carbon monoxide replaces oxygen in the blood and reduces its ability to transport oxygen to vital organs in the body.

Conformity Review
The process which ensures that local government actions and projects (i.e., planning, actions, permit activity, project approval, programming, or funding) do not prevent attainment of the National Ambient Air Quality Standards (NAAQS).

Congestion Management Plan (CMP)
A county-wide program which addresses congestion problems in a coordinated manner with other agencies in the county.

Control Measure
The nuts and bolts of the South Coast Air Quality Management Plan. Control measures are commitments to adopt rules and regulations to reduce pollutant emissions. There are 126 control measures in the Air Quality Management Plan, 17 of which are designated for local agency action.

District
A commonly-used abbreviation for the South Coast Air Quality Management District (SCAQMD).

Environmental Impact Report (EIR)
An informational document which provides public agencies and the public in general with detailed information about the effects which a proposed project is likely to have on the environment.

High Occupancy Vehicle (HOV) Lane
HOV lane on a highway or freeway which is restricted for use by vehicles carrying two or more passengers.

Memorandum of Understanding (MOU)

Mobile Sources
Emissions from on-road motor vehicles.

Oxides of Nitrogen (NOx)
Oxides of nitrogen are brownish gas that is formed in the atmosphere through a rapid reaction of the colorless gas nitric oxide (NO) with atmospheric oxygen. Oxides of nitrogen play an important role in visibility degradation within the basin. They are formed in the atmosphere from reactions involving NOx emissions from man-made combustion sources.

Oxides of Sulfur (SOx)
A colorless gas with a pungent irritating odor. It is created by the combustion of sulfur–containing fuel.

Ozone (O_3)
A secondary pollutant which is formed in the atmosphere through a reaction of reactive organic gases (ROG), nitrogen oxides (NOx), oxygen, and other hydrocarbon materials with sunlight.

Particulate Matter (PM)
Suspended particulates which included a complex mixture of man-made and natural substances including sulfates, nitrates, metals, elemental carbon, sea salt, soil organics and other materials.

Reactive Organic Gases (ROG)
Reactive organic gases are hydrocarbons. ROG emissions react with other pollutants in the presence of sunlight to form photo-chemical oxidants or ozone.

Regional Mobility Plan (RMP)
A comprehensive regional planning document for the Southern California Association of Governments (SCAG) region which provides specific means for recapturing and retaining the transportation mobility levels of 1984.

South Coast Air Quality Management District (SCAQMD)
The air pollution control district for the area which includes the County of Orange and the urbanized portions of Los Angeles, Riverside and San Bernardino Counties. (The agency's responsibilities as they pertain to conformity are detailed in Appendix C of this document.)

Southern California Association of Governments (SCAG)
The metropolitan planning organization for the six-county region which includes Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura Counties. (The agency's responsibilities for conformity are detailed in Appendix C of this document.)

Transportation Control Measure (TCM)
Any demand management, systems management, facilities improvement, or technology-based measure (or mixture thereof) intended to influence choices of mode, time of day, or decisions whether to travel at all.

Transportation Demand Management (TDM)
Demand based techniques for reducing traffic congestion, such as ridesharing programs and flexible work schedules enabling employees to commute to and from work outside of peak hours.

Transportation Management Association (TMA)
An organization with its main purpose is to coordinate, among association members, Transportation Demand Management techniques to reduce traffic congestion.

Vehicle Miles Travelled (VMT)
The total miles traveled by all vehicles in a particular geographic area measured over a 24-hour period.

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References

City of Chino

Community Development Department ..... Earl P. Nelson, Director
Community Services Department ..... Tina Sray, Manager of Parks and Facilities
Public Works Services ..... Tom Mace, Street Superintendent
Larry Mayfield, Fleet Superintendent

County of San Bernardino

Regional Air Quality Element,
Technical Advisory Committee ..... Sharon Hightower, Chairman
Julie Hemphill, Project Manager
San Bernardino Association of Governments ..... Wes McDaniel
City of Big Bear Lake ..... Ed Johnson
City of Colton ..... Jaime R. Aquilar
City of Fontana ..... Kurt Anderson
City of Grand Terrace ..... David Sawyer
City of Highland ..... Steve Walker
City of Loma Linda ..... Dan Smith
City of Montclair ..... Hall Fiederickson
City of Ontario ..... Joyce Babicz
City of Rancho Cucamonga ..... Brad Buller
City of Redlands ..... Jeff Shaw
City of Rialto ..... Rod Taylor
City of San Bernardino ..... Valerie Ross
City of Upland ..... Jeff Bloom
City of Yucaipa ..... John McMains

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Policies

Appendix

A. SCAQMD - AQMP, Control Measure/Chino Air Quality Element Action Matrix

B. Regional Air Quality Plan, San Bernardino County/Cities, Technical Background Report (under separate cover)

C. Regional Air Quality Plan, San Bernardino County/Cities, Socioeconomics Analysis - Selected Air Quality Measures (under separate cover)

AIR QUALITY ELEMENT APPENDIX A

SCAQMD-AQMP Control Measures/Chino Air Quality Element Action Matrix

Chino General Plan

November 1991

Air Quality Management Plan (AQMP) Control Measure/ Chino Air Quality Element (CAQE) Action Matrix

AQMP CONTROL MEASURE		CAQE ACTION	
1.a.	Person Work Trip Reduction.	A8-2.1.3 A8-2.1.6	Trip Reduction Ordinance. Trip Reduction Program.
1.b.	Non-Motorized Transportation.	A8-2.1.3 A8-2.1.6 A8-2.6.1 A8-2.6.3	Trip Reduction Ordinance. Trip Reduction Program. Bike Trails. Bicycle Parking and Showers.
2.a.	Employer Ridesharing and Transit Incentives.	A8-1.2.2 A8-2.1.4 A8-2.9.3	Establish Regional Transportation Management Agencies. Compliance with SCAQMD AVR. Support Tax Credit/Tax Benefit.
2.b.	Parking Management.	A8-2.2.1 A8-2.3.6 A8-2.7.1 A8-2.7.2 A8-2.7.3 A8-2.8.1	Travel Demand Management. On-Street Parking During Peak Hours. Rideshare Incentives in Public Parking Lots. Limit Parking Supply by Zone. Preferential Parking for Ridesharers. Parking Cost Standards.
2.d.	Merchant Transportation Incentives.	A8-2.6.2	Merchant Transportation Incentives.
2.e.	Auto Use Restrictions.	A8-2.5.2	Auto Use Restrictions.
2.f.	HOV Facilities.		Not Applicable.
2.g.	Transit Improvements.	A8-1.2.3	OmniTrans/RTD - Transit Improvements.
3.a.	Truck Dispatching, Rescheduling and Rerouting.	A8-2.3.3 A8-2.3.4 A8-2.3.7	Truck Routing/Deliveries. Restrict Trucks from Major Arterials. Surcharge for Truck Operations During Peak Periods.
3.b.	Diverting Port-Related Truck Traffic to Rail.		Not Applicable.
4.	Traffic Flow Improvements.	A8-2.3.5 A8-2.3.6	Traffic Signal Improvements. On-Street Parking During Peak Hours.
5.	Non-Recurrent Congestion.		Not Applicable.

APPENDIX "A"

Air Quality Management Plan (AQMP) Control Measure/ Chino Air Quality Element (CAQE) Action Matrix

AQMP CONTROL MEASURE	CAQE ACTION
6. Aircraft and Ground Service Vehicles.	Not Applicable.
7. Centralized Ground Power Systems.	Not Applicable.
8. Airport Ground Access.	Not Applicable.
9. Replacement of High Emitting Aircraft.	Not Applicable.
10. General Aviation Vapor Recovery.	Not Applicable.
11. Rail Consolidation to Reduce Grade Crossings.	Not Applicable.
12.a. Paved Roads.	A8-5.1.1 Street Sweeping. A8-5.1.3 Limit Dust. A8-5.1.4 Storage of Particulate Matter. A8-5.2.1 Control Emissions, Construction and Demolition. A8-5.2.2 Particulate Emissions from Truck Hauling.
12.b. Unpaved Roads and Parking Lots.	A8-5.1.2 Control Particulate Emissions from Unpaved Roads.
13. Freeway and Highway Capacity Enhancements.	Not Applicable.
14. Railroad Electrification.	Not Applicable.
16. High Speed Rail.	Not Applicable.
17. Growth Management.	A8-4.1.3 Coordinate Regional Job/Housing Balance. A8-4.2.3 Growth Management Plan Performance.
18.a. Local Government Energy Conservation.	A8-6.1.2 Energy Conservation Requirements. A8-6.2.1 Emission Reduction from Pool Heaters. A8-6.2.2 Emission Reduction from Water Heaters.

APPENDIX "A" (cont'd.)

BACKGROUND STATEMENT

The air quality in San Bernardino County results from a unique combination of factors; air flow patterns and emission sources, both local and those located through the region, results in some of the worst air quality in the nation. San Bernardino County regularly exceeds state and federal air quality standards for Ozone (O_3), Carbon Monoxide (CO), Nitrogen Dioxide (NO_2) and Particulate Matter (PM_{10}). Exceedances are acute during summer months when onshore wind patterns transport pollutants from the western portion of the South Coast Air Basin, notably Los Angeles and Orange Counties and combine with local sources. San Bernardino County records the most severe violations of air quality standards for Ozone and PM_{10} in the summer months relative to the rest of the air basin.

REGULATORY FRAMEWORK

The Clean Air Act, promulgated in 1970 and amended twice thereafter (including the recent 1990 amendment), establishes the framework for modern air pollution control. The Act directs the Environmental Protection Agency (EPA) to establish ambient air standards for six pollutants: Ozone, Carbon Monoxide, Lead, Nitrogen Dioxide, Particulate Matter and Sulphur Dioxide. The standards (NAAQS) are divided into primary and secondary standards; the former are set to protect human health within an adequate margin of safety and the latter to protect environmental values such as plant and animal life.

According to the Act, states are required to submit a State Implementation Plans (SIP) for areas that exceed the NAAQS, or nonattainment areas. The SIP, which is reviewed and approved by the EPA, must demonstrate how the federal standards will be achieved. Failure to submit a plan or secure approval could lead to denial of federal funding and permits for such improvements as highway construction and sewage treatment plants. In cases where the SIP is submitted but fails to demonstrate achievement of the standards, the EPA is directed to prepare a Federal Implementation Plan.

In addition to the six pollutants regulated by federal legislation, the California Clean Air Act establishes standards for Hydrogen Sulphide, Sulphates and Vinyl Chloride. Responsibility for achieving these standards (which are more stringent that federal standards) is placed on the California Air Resources Board and local air pollution control districts. District plans for nonattainment areas must be designed to achieve a 5% annual reduction in emissions. The Air Quality Management Plan (AQMP) is, in turn, incorporated into the SIP.

With the aim of complying with all federal standards by 2007, the South Coast Air Quality Management District (SCAQMD) and Southern California Association of Governments (SCAG) jointly prepared the 1989 Air Quality Management Plan (AQMP). The Plan calls for implementation of rules and regulations by the Air Resources Board, the South Coast Air Quality Management District, the Environmental Protection Agency and Local Jurisdictions.

The AQMP calls upon local governments to achieve an 8% reduction regionwide in emissions from reactive organic gases and oxides of nitrogen. Specifically, local governments are asked to implement appropriate control measures contained in the AQMP to achieve this reduction. Several measures direct local government to adopt an Air Quality Element or its equivalent into its General Plan. If all of the applicable control measures are not implemented, the air quality standards cannot be achieved. In this event, the existing moratorium on location of stationary sources in the basin will be continue and federal funding and other permits may be denied until the standards are met.

In an effort to comply with federal and state regulations, and to improve air quality in the county and region, this Air Quality Element has been adopted.

Subtopic 2.6 CLEANER FUELS

Policy 2.6.1 **Support Legislation**

Promote state and federal legislation which would improve vehicle/transportation technology and which would establish differential pricing mechanisms to assess the true cost of emissions.

Programs:

2.6.1.1 Support legislation to stimulate the development of practical electric vehicles (15).

2.6.1.2 Support state legislation which would establish: - Emission Fees on gasoline products and Differential Registration Fees on motor vehicles according to the emission levels that they are designed to produce. - Include exploration of an option that imposes pollution fees on individual vehicles at time of mandated smog inspections, based on actual vehicle performance.

2.6.1.3 Support legislation which tightens the existing vehicle inspection program, both in terms of standards to be met and requirements for compliance.

Policy 2.6.2 **Institute Clean Fuel Systems**

Invest in clean fuel systems on new local government fleet vehicles.

Programs:

2.6.2.1 Institute clean fuel systems on new local government fleet vehicles (G-4).

TOPIC 3: AIR TRANSPORTATION

GOAL 3 Minimum feasible emissions from air carrier airports.

Policy 3.1 **Promote Improved Technology**

Promote requiring the best available technology to reduce emissions in aircraft fleet.

Programs:

3.1.1 Adopt/urge establishment of the best available technology and operational measures for aircraft and ground service vehicles (6).

3.1.2 Support phasing out of Stage II aircraft and the earliest possible transition to Stage III aircraft for operation within the Air Basin (9).

Policy 3.2 **Promote Centralized Ground Power**

Promote installation of centralized ground power systems at existing air carrier airports.

[1] Programs which further more than one air quality policy.

Policy 2.3.2 **Expand Transit in the Air Basin**

Promote expansion of all forms of transit in the urbanized portions of San Bernardino, Orange, Los Angeles and Riverside Counties.

Programs:

2.3.2.1 Influence the expansion of intraregional commuter and main line rail services, particularly those linking with destinations in San Bernardino County.

2.3.2.2 Support public transit providers in efforts to increase funding for transit improvements to supplement other means of travel (2.g).[1]

2.3.2.3 Jointly support efforts to establish a regionwide bus pass.

Subtopic 2.4 NON-MOTORIZED MEANS OF TRANSPORTATION

Policy 2.4.1 **Promote Non-Motorized Transportation**

Provide bicycle and pedestrian pathways to encourage non-motorized trips.

Programs:

2.4.1.1 Develop standards and guidelines for support facilities to incorporate into development plans for increased bicycle and pedestrian routes to link appropriate activity centers to nearby residential development.

Subtopic 2.5 PARKING MANAGEMENT

Policy 2.5.1 **Manage Parking Supply**

Manage parking supply to discourage auto use, while ensuring that economic development goals will not be sacrificed.

Programs:

2.5.1.1 Establish short and long-term parking management strategies at governmental and private facilities in ways that discourage single occupancy vehicle usage and reward high vehicle occupancy rates without placing the County at a competitive disadvantage.[1]

Policy 2.5.2 **Encourage Market Incentives/Disincentives**

Promote a regional approach to increasing parking costs in order to discourage low vehicle occupancy.

Programs:

2.5.2.1 Establish parking management strategies for governmental and private facilities in ways that discourage single occupancy vehicle usage and reward high vehicle occupancy rates without placing the County at an economic disadvantage in enticing jobs.[1]

[1] Programs which further more than one air quality policy.

Programs:

2.2.1.1 Jointly, through the County, SANBAG, and SCAG, participate with adjacent counties in expanding HOV lanes on the freeway system within those counties.

Policy 2.2.3 **Integrate Congestion Management Program**

Coordinate overlapping components of the State mandated Congestion Management Program and the Regional Air Quality Plan.

Programs:

2.2.3.1 Participate with SANBAG in defining and implementing a Congestion Management Program for San Bernardino County to insure appropriate coordination with air quality planning.

Policy 2.2.4 **Establish Congestion Fees**

Promote market based incentives and disincentives to relieve peak hour/peak direction congestion within highly congested travel corridors.

Programs:

2.2.4.1 Cooperatively initiate a pilot program to explore, jointly with Los Angeles, Orange and Riverside counties, methods and workability of Congestion Fees for peak hour/peak direction use to be levied within highly congested travel corridors, particularly those which generate emissions transported to San Bernardino County.

Subtopic 2.3 EXPANDED TRANSIT SYSTEMS AND SERVICES

Policy 2.3.1 **Expand Transit in the County**

Cooperate in efforts to expand bus, rail and other forms of transit in the portion of the South Coast Air Basin within San Bernardino.

Programs:

2.3.1.1 Participate with public transit providers serving San Bernardino County in a cooperative program to increase transit services with existing equipment and expand services through transit facility improvements.

2.3.1.2 Coordinate with public transit providers to increase funding for transit improvements to supplement other means of travel (2.g).[1]

2.3.1.3 Plan for intraregional commuter and main line rail service development including convenience facilities at rail stops.

2.3.1.4 Develop design standards that promote access to transit facilities.

[1] Programs which further more than one air quality policy.

Subtopic 2.1 AUTO USE

Policy 2.1.1 Eliminate Vehicle Trips

Use incentives, regulations and Transportation Demand Management in cooperation with other jurisdictions in the South Coast Air Basin to eliminate vehicle trips which would otherwise be made.

Programs:

2.1.1.1 Establish and implement a Transportation Demand Management Program.[1]

2.1.1.2 Define and implement auto limitation procedures in selected areas and at selected times, provided that alternative transportation modes are available.[1]

2.1.1.3 Establish incentives and regulations to eliminate work trips.[1]

Policy 2.1.2 Reduce Vehicle Miles Traveled

Use incentives, regulations and Transportation Demand Management in cooperation with other jurisdictions in the South Coast Air Basin to reduce the vehicle miles traveled for auto trips which still need to be made.

Programs:

2.1.2.1 Establish and implement a Transportation Demand Management Program.[1]

2.1.2.2 Establish and maintain telecommunications strategies to reduce the length of auto trips.

2.1.2.3 Define and implement auto limitation procedures in selected areas and at selected times, provided that alternative transportation modes are available.[1]

Subtopic 2.2 CONGESTION MANAGEMENT

Policy 2.2.1 Modify Work Schedules

Promote and establish modified work schedules which reduce peak period auto travel.

Programs:

2.2.1.1 Establish incentives and regulations to spread work trips over a longer period to reduce peak period congestion.[1]

Policy 2.2.2 Establish HOV Lanes

Participate in efforts to achieve increased designation, construction, and operation of HOV lanes on freeways in Los Angeles, Orange, Riverside and San Bernardino counties.

[1] Programs which further more than one air quality policy.

1.2.3 Establish and maintain an implementation/monitoring system devised as part of the Air Quality Plan preparation. Integrate with monitoring and reporting systems required for purposes which overlap with the Air Quality Plan.

Policy 1.3 **Affect Source Jurisdictions**

Cooperate actively with Los Angeles, Orange and Riverside counties to comprehensively improve air quality at the emission source.

Programs:

1.3.1 Jointly establish a communication network with key elected officials and staff involved in air quality planning in Los Angeles, Orange and Riverside counties as the basis for identifying and implementing parallel measures of mutual benefit.

Policy 1.4 **Encourage Community Participation**

Involve environmental groups, the business community, special interests and the general public in the formulation and implementation of programs which effectively reduce air borne pollutants.

Programs:

1.4.1 Design and conduct efforts to involve the public and affected/interested parties in the adoption of local air quality plans and implementation of air quality improvement programs.

- Conduct Public Forums
- Establish Communication and Education Programs
- Make written briefs available locally
- Conduct Planning Commission/City Council public workshops
- Utilize a variety of media forms to maximize citizen involvement

Policy 1.5 **Support Innovative Approaches**

Advocate and support innovative strategies to improve air quality.

Programs:

1.5.1 Support new approaches to improving air quality through:

- Supporting legislation;
- Cooperating with regional bodies;
- Establishing pilot programs; and
- Funding and/or participating in private/public partnerships.

TOPIC 2: GROUND TRANSPORTATION

GOAL 2 A diverse and efficiently operated ground transportation system which generates the minimum feasible pollutants.

[1] Programs which further more than one air quality policy.

Principles

1. **Air Quality and Economic Growth**

   Achieve air quality improvements in such a way that continued economic growth can be sustained.

2. **Market Incentives and Regulations**

   Achieve necessary air quality related life style and economic changes through market incentives where feasible and through regulatory measures where necessary.

GOALS, POLICIES AND PROGRAMS

Because the air quality problem is larger than any one jurisdiction, this Air Quality Element includes goals, policies and programs which have been accepted by the fifteen cities in the San Bernardino County portion of the South Coast Air Basin. These consensus goals, policies and programs provide a common foundation for coordinated action.

TOPIC 1: GOVERNMENT ORGANIZATION, ROLES & RESPONSIBILITIES

GOAL 1 Effective coordination of air quality improvement within the portion of the South Coast Air Basin in San Bernardino County and improved air quality through reductions in pollutants from Orange and Los Angeles counties.

Policy 1.1 **Establish Coordinated Approach**

Coordinate with other jurisdictions in San Bernardino County to establish parallel air quality plans and implementation programs.

Programs:

1.1.1 Adopt local air quality plans based on the San Bernardino County/Cities Regional Air Quality Plan.

1.1.2 Establish an ongoing air quality implementation and project referral process within the San Bernardino portion of the South Coast Air Basin, adapting it as necessary to local circumstances, resources and procedures.

Policy 1.2 **Integrate With Related Programs**

Coordinate a process to integrate related functional programs' implementation, monitoring and reporting.

Programs:

1.2.1 Establish a coordination process for relating parallel actions undertaken as part of other regional or countywide plans.

1.2.2 Participate with SANBAG in defining and implementing a Congestion Management Program for San Bernardino County.[1]

TOPIC 2: GROUND TRANSPORTATION		
GOAL	**POLICIES**	**PROGRAMS AND ACTION OPTIONS**
SUBTOPIC 5: PARKING MANAGEMENT		
A diverse and efficiently operated ground transportation system which generates the minimum feasible pollutants.	Manage Parking Supply 1. Manage parking supply to discourage auto use, while ensuring that economic development goals will not be sacrificed.	1. Establish short and long term parking management strategies for governmental and private facilities that discourage single occupancy vehicle usage and reward high vehicle occupancy rates without placing the County at an economic disadvantage in enticing jobs by means such as[1]: • Reducing or redirecting parking supply. • Creating Parking "Banks" of landscaping and other less intensive land uses which could be used for parking in the future or could be developed with a more intensive land use provided the tenant/owner effectively reduces the demand for parking (through Transportation Demand Management, Regulation XV programs, increased parking cost, etc.).
A diverse and efficiently operated ground transportation system which generates the minimum feasible pollutants.	Encourage Market Incentives/ Disincentives 2. Promote a regional approach to increasing parking costs in order to discourage low vehicle occupancy.	1. Establish parking management strategies for governmental and private facilities that discourage single occupancy vehicle usage and reward high vehicle occupancy rates without placing the County at an economic disadvantage in enticing jobs by means such as[1]: • Recapturing parking costs through: establish fees; single occupant surcharges; reduced employee subsidized parking; and increased parking enforcement.
SUBTOPIC 6: CLEANER FUELS		
A diverse and efficiently operated ground transportation system which generates the minimum feasible pollutants.	Support Legislation 1. Promote state and federal legislation which would improve vehicle/transportation technology and which would establish differential pricing mechanisms to assess the true cost of emissions.	1. Support legislation to stimulate the development of practical electric vehicles (15). 2. Support state legislation which would establish: 1) Emission Fees on gasoline products and Differential Registration fees on motor vehicles according to the emission levels that they are designed to produce. Include exploration of an option that imposes pollution fees on individual vehicles at the time of mandated smog inspection, based on actual vehicle performance. 3. Support legislation which tightens the existing vehicle inspection program, both in terms of standards to be met and requirements for compliance.
	Institute Clean Fuel Systems 2. Invest in clean fuel systems on new local government fleet vehicles.	1. Institute clean fuel systems on new local government fleet vehicles (C-4).

[1] Programs which further more than one air quality policy

TOPIC 2: GROUND TRANSPORTATION		
GOAL	**POLICIES**	**PROGRAMS AND ACTION OPTIONS**
SUBTOPIC 2: CONGESTION MANAGEMENT (Continued)		
A diverse and efficiently operated ground transportation system which generates the minimum feasible pollutants.	Integrate Congestion Management Program 3. Coordinate overlapping components of the State mandated Congestion Management Program and the Regional Air Quality Plan.	1. Participate with SANBAG in defining and implementing a Congestion Management Program for San Bernardino County to insure appropriate coordination with air quality planning.
	Establish Congestion Fees 4. Promote market based incentives and disincentives to relieve peak hour/peak direction congestion within highly congested travel corridors.	1. Cooperatively initiate a pilot program to explore, jointly with Los Angeles, Orange and Riverside counties, methods and workability of Congestion Fees for peak hour/peak direction use to be levied within highly congested travel corridors, particularly those which generate emissions transported to San Bernardino County.
SUBTOPIC 3: EXPANDED TRANSIT SYSTEMS AND SERVICES		
A diverse and efficiently operated ground transportation system which generates the minimum feasible pollutants.	Expand Transit in the County 1. Cooperate in efforts to expand bus, rail and other forms of transit in the portion of the South Coast Air Basin within San Bernardino.	1. Participate with public transit providers serving San Bernardino County in a cooperative program to increase transit services with existing equipment and expand services through transit facility improvements. 2. Coordinate with public transit providers to increase funding for transit improvements to supplement other means of travel (2g).[1] 3. Plan for intraregional commuter and main line rail service development including convenience facilities at rail stops through such means as: • Intensifying planned land uses in the vicinity of transit stops. • Consolidating parking facilities to support transit as well as adjacent uses. 4. Develop design standards that promote access to transit facilities.
	Expand Transit in the Air Basin 2. Promote expansion of all forms of transit in the urbanized portions of San Bernardino, Orange, Los Angeles and Riverside Counties.	1. Influence the expansion of intraregional commuter and main line rail services, particularly those linking with destinations in San Bernardino County. 2. Support public transit providers in efforts to increase funding for transit improvements to supplement other means of travel (2g).[1] 3. Jointly support efforts to establish a regionwide bus pass.
SUBTOPIC 4: NON-MOTORIZED MEANS OF TRANSPORTATION		
A diverse and efficiently operated ground transportation system which generates the minimum feasible pollutants.	Promote Non-Motorized Transportation 1. Provide for bicycle and pedestrian pathways to encourage non-motorized trips.	1. Develop standards and guidelines to incorporate into development plans for increased bicycle and pedestrian routes and support facilities to link appropriate activity centers to nearby residential development.

[1] Programs which further more than one air quality policy

TOPIC 2: GROUND TRANSPORTATION		
GOAL	**POLICIES**	**PROGRAMS AND ACTION OPTIONS**
SUBTOPIC 1: AUTO USE		
A diverse and efficiently operated ground transportation system which generates the minimum feasible pollutants.	Reduce vehicle miles traveled (Continued)	2. Establish and maintain telecommunications strategies to reduce the length of auto trips through such actions as:[1] • Implementing teleconferencing and telecommuting programs in public agencies (1.b.) • Requiring teleconferencing and telecommuting for private employers with more than 25 employees at a single location. Apply to existing businesses at license renewal times; to new businesses at project approval or permit stage (1.b.). 3. Define and implement auto limitation procedures in selected areas and at selected times, provided that alternative transportation modes are available, by (2.e.):[1] • Establishing regulations and procedures to limit direct auto access: - To special event centers; and - In auto-free zones during peak periods.
SUBTOPIC 2: CONGESTION MANAGEMENT		
A diverse and efficiently operated ground transportation system which generates the minimum feasible pollutants.	Modify Work Schedules 1. Promote and establish modified work schedules which reduce peak period auto travel	1. Establish incentives and regulations to spread work trips over a longer period to reduce peak period congestion, including such actions as (1.a):[1] • Implementing staggered, flexible and compressed work schedules in public agencies. • Requiring work schedule flexibility programs for employers with more than 25 employees at a single location. Apply to existing businesses at license renewal time; to new businesses at project approval or permit stage.
	Establish HOV lanes 2. Participate in efforts to achieve increased designation, construction, and operation of HOV lanes on freeways in Los Angeles, Orange, Riverside and San Bernardino Counties.	1. Jointly, through the County, SANBAG, and SCAG participate with adjacent counties in expanding HOV lanes on the freeway system within those counties by: • Initiating an HOV task force to work with CALTRANS in implementing HOV lanes within the urbanized and urbanizing portions of San Bernardino, Orange, Los Angeles and Riverside counties.

[1] Programs which further more than one air quality policy

TOPIC 2: GROUND TRANSPORTATION		
GOAL	**POLICIES**	**PROGRAMS AND ACTION OPTIONS**
SUBTOPIC 1: AUTO USE		
A diverse and efficiently operated ground transportation system which generates the minimum feasible pollutants.	Eliminate Vehicle Trips 1. **Use incentives, regulations and Transportation Demand Management in cooperation with other jurisdictions in the South Coast Air Basin to eliminate vehicle trips which would otherwise be made.**	1. Establish and implement a Transportation Demand Management Program through actions such as[1]: • Requiring TMA/TMO establishment for large employers and commercial/industrial complexes. Apply to new businesses at project approval or permit stage (2.a.). • Implementing employee rideshare and transit incentives in public agencies (2.a.). • Requiring employee rideshare and transit incentives for employers with more than 25 employees at a single location. Apply to existing businesses at license renewal time; to new businesses at project approval or permit stage (2.a.). • Participating in cooperative efforts to establish legislation affording incentives for purchase of Vanpools (2.c.). • Participating in the design and establishment of incentives which would eliminate vehicle trips. • Implementing teleconferencing and telecommuting programs in public agencies (1.b.). • Requiring teleconferencing and telecommuting for private employers with more than 25 employees at a single location. Apply to existing businesses at license renewal time; to new businesses at project approval or permit stage (1.b.). • Participating with SANBAG to develop a private/public telecommunication center in San Bernardino County. 2. Define and implement auto limitation procedures in selected areas and at selected times, provided that alternative transportation modes are available, by: • Establishing regulations and procedures to limit direct auto access(2.e.):[1] - To special event centers; and - In auto-free zones during peak periods. 3. Establish incentives and regulations to eliminate work trips including such actions as: • Implementing staggered, flexible and compressed work schedules in public agencies (1.a)[1]. • Requiring work schedule flexibility programs for employers with more than 25 employees at a single location. Apply to existing businesses at license renewal time; to new businesses at project approval or permit stage (1.a)[1].
	Reduce vehicle miles traveled 2. **Use incentives, regulations and Transportation Demand Management in cooperation with other jurisdictions in the South Coast Air Basin to reduce the vehicle miles traveled for auto trips which still need to be made.**	1. Establish and implement a Transportation Demand Management Program through actions such as[1]: • Requiring TMA/TMO establishment for large employers and commercial complexes. Apply to new businesses at project approval or permit stage (2.a.). • Implementing employee rideshare and transit incentives in public agencies (2.a.). • Requiring employee rideshare and transit incentives for employers with more than 25 employees at a single location. Apply to existing businesses at license renewal time; to new businesses at project approval or permit stage (2.a.). • Participating in cooperative efforts to establish legislation providing incentives for purchase of Vanpools (2.c.). • Participating in the design and establishment of incentives which would reduce vehicle miles traveled.

[1] Programs which further more than one air quality policy

TOPIC 1: GOVERNMENT ORGANIZATION, ROLES & RESPONSIBILITIES		
GOAL	**POLICIES**	**PROGRAMS AND ACTION OPTIONS**
Effective coordination of air quality improvement within the portion of the South Coast Air Basin in San Bernardino County and improved air quality through reductions in pollutants from Orange and Los Angeles counties.	Support Innovative Approaches 5. Advocate and support innovative strategies to improve air quality.	1. Support new approaches to improving air quality through: • Supporting legislation; • Cooperating with regional bodies; • Establishing pilot programs; and • Funding and/or participating in private/public partnerships Potential actions could include: • Supporting legislation which would authorize imposition of consumer product Emission Fees, either at retail outlets or manufacturing points; • Instituting Time of Day, Seasonal and Place Control Measures; • Implementing an Auto Buy-Back Program; • Creating an Emissions Reduction Trust to administer emission offsets; • Investigating the feasibility of Highway Electrification and Automation; and • Supporting state enabling legislation to reassess the equitable distribution of property and sales tax revenues.

GOALS, POLICIES, PROGRAMS AND ACTION OPTIONS

TOPIC 1: GOVERNMENT ORGANIZATION, ROLES & RESPONSIBILITIES		
GOAL	**POLICIES**	**PROGRAMS AND ACTION OPTIONS**
Effective coordination of air quality improvement within the portion of the South Coast Air Basin in San Bernardino County and improved air quality through reductions in pollutants from Orange and Los Angeles counties.	Establish Coordinated Approach 1. Coordinate with other jurisdictions in San Bernardino County to establish parallel air quality plans and implementation programs.	1. Adopt local air quality plans based on the San Bernardino County/Cities Regional Air Quality Plan. 2. Establish an ongoing air quality implementation and project referral process within the San Bernardino portion of the South Coast Air Basin, adapting it as necessary to local circumstances, resources and procedures.
	Integrate With Related Programs 2. Coordinate a process to integrate related functional programs' implementation, monitoring and reporting.	1. Establish a coordination process for relating parallel and implementive actions undertaken as part of other regional or countywide plans. 2. Participate with SANBAG in defining and implementing a Congestion Management Program for San Bernardino County.[1] 3. Establish and maintain an implementation/monitoring system devised as part of the Air Quality Plan preparation. Integrate with monitoring and reporting systems required for purposes which overlap with the Air Quality Plan.
	Affect Source Jurisdictions 3. Cooperate actively with Los Angeles, Orange and Riverside counties to comprehensively improve air quality at the emission source.	1. Jointly establish a communication network with key elected officials and staff involved in air quality planning in Los Angeles, Orange and Riverside counties as the basis for identifying and implementing parallel measures of mutual benefit.
	Encourage Community Participation 4. Involve environmental groups, the business community, special interests and the general public in the formulation and implementation of programs which effectively reduce air borne pollutants.	1. Design and conduct efforts to involve the public and affected/interested parties in the adoption of local air quality plans and implementation of air quality improvement programs, including: • Conduct Public Forums • Establish Communication and Education Programs • Make written briefs available locally • Conduct Planning Commission/City Council public workshops • Utilize a variety of media forms to maximize citizen involvement

[1] Programs which further more than one air quality policy

GOALS, POLICIES, PROGRAMS AND ACTION OPTIONS

Revised November 29, 1990

REGIONAL AIR QUALITY PLAN	
PURPOSE	**PRINCIPLES**
Achievement of state and federal air quality standards within established schedules in the South Coast Air Quality Management Plan and maintenance of air quality standards at prescribed levels once they are achieved.	Air Quality and Economic Growth 1. Achieve air quality improvements in such a way that continued economic growth can be sustained. Market Incentives and Regulations 2. Achieve necessary air quality related life style and economic changes through market incentives where feasible and through regulatory measures where necessary.

Policy 5.2 **Reduce Emissions from Building Materials/Methods**

Reduce emissions from building materials and methods which generate excessive pollutants.

Programs:

5.2.1 Adopt incentives, regulations and procedures to prohibit the use of building materials and methods which generate excessive pollutants (F-9).

TOPIC 6: ENERGY CONSERVATION

GOAL 6 Reduced emissions through reduced energy consumption.

Policy 6.1 **Energy Conservation**

Reduce energy consumption through conservation improvements and requirements.

Programs:

6.1.1 Implement plans and programs to phase in energy conservation improvements through the annual budget process (18.a).

6.1.2 Adopt incentives and regulations to enact energy conservation requirements for private development.

Policy 6.2 **Limit Water Heater Emissions**

Reduce water heating emissions resulting from swimming pool heaters and residential and commercial water heaters.

Programs:

6.2.1 Adopt incentives and regulations to reduce emissions from swimming pool heaters (d-4).

6.2.2 Adopt incentives and regulations to reduce emissions from residential and commercial water heating (d-5).

Policy 6.3 **Recycle Wastes**

Promote local recycling of wastes and use of recycled materials.

Programs:

6.3.1 Implement provisions of AB 939 and adopt incentives, regulations and procedures to specify local recycling requirements (18.b).

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[1] Programs which further more than one air quality policy.

4.2.4 Develop and adopt an agreement among the participating jurisdictions as to mutually acceptable approaches to improve and maintain jobs/housing balance.

Policy 4.3 **Protect Sensitive Receptors**

Support a regional approach to regulating the location and design of land uses which are especially sensitive to air pollution.

Programs:

4.3.1 Participate with the SCAQMD in jointly formulating appropriate standards for regulating the location and protection of sensitive receptors (schools, day care facilities, hospitals and the like) from excessive and hazardous emissions.

Policy 4.4 **Integrate Planning Process**

Integrate air quality planning with the land use and transportation process.

Programs:

4.4.1 Locate and design new development in a manner that will minimize direct and indirect emission of air contaminants.

TOPIC 5: PARTICULATE EMISSIONS

GOAL 5 The minimum practicable particulate emissions from the construction and operation of roads and buildings.

Policy 5.1 **Control Dust**

Reduce particulate emissions from roads, parking lots, construction sites and agricultural lands.

Programs:

5.1.1 Adopt incentives, regulations and procedures to manage paved roads so they produce the minimum practicable level of particulates (12.a).

5.1.2 Adopt incentives, regulations and procedures to minimize particulate emissions during road, parking lot and building construction (f-4).

5.1.3 Adopt incentives, regulations and procedures to control particulate emissions from unpaved roads, drives, vehicle maneuvering areas and parking lots (12.b).

5.1.4 Adopt incentives, regulations and procedures to limit dust from agricultural lands and operations (where applicable) (E-3).

[1] Programs which further more than one air quality policy.

Programs:

3.2.1 Adopt/urge establishment of requirements for centralized ground power systems to be installed and used as soon as practicable at existing air carrier airports (7).

Policy 3.3 **Promote Improved Ground Access**

Promote conditioning of air carrier airports upon inclusion of plans for improved ground access.

Programs:

3.3.1 Adopt/urge establishment of an ordinance requiring air carrier airport operators to obtain permits based on approved plans for trip reduction, facility design and access improvements (8).

TOPIC 4: LAND USE

Goal 4 A pattern of land uses which can be efficiently served by a diversified transportation system and land development projects which directly and indirectly generate the minimum feasible air pollutants (17).

Policy 4.1 **Manage Growth**

Manage growth by insuring the timely provision of infrastructure to serve new development.

Programs:

4.1.1 Incorporate phasing policies and requirements in general plans and development plans to achieve timely provision of infrastructure (particularly transportation facilities) to serve development.

Policy 4.2 **Balance Growth**

Improve the balance between jobs and housing in order to create a more efficient urban form.

Programs:

4.2.1 Improve jobs/housing balance through new development and redevelopment project reviews and actions.

4.2.2 Improve jobs/housing balance at a subregional level in relation to major activity centers as new development occurs.

4.2.3 Continue support for and consider expansion of the CLOUT demonstration project to incorporate: incentive oriented tax credits; loan programs; small business development programs; and complementary land use policies, all aimed at improving the jobs/housing balance in the western San Bernardino/eastern Los Angeles Counties area.

[1] Programs which further more than one air quality policy.

Fugitive Dust - Dust particles that are introduced into the air through certain activities such as soil cultivation, off-road vehicles, or any vehicles operating on open fields or dirt roadways.

Lead

Lead is a gray-white metal that is soft, malleable, and resistant to corrosion. Sources of lead resulting in concentrations in the air include industrial sources and weathering of soils, followed by fugitive dust emissions. Health effects from exposure to lead include brain and kidney damage, learning disabilities, seizures and death. Fetuses, infants and children are more sensitive than others to the adverse effects of lead exposure. Exposure to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands and a lower intelligence quotient.

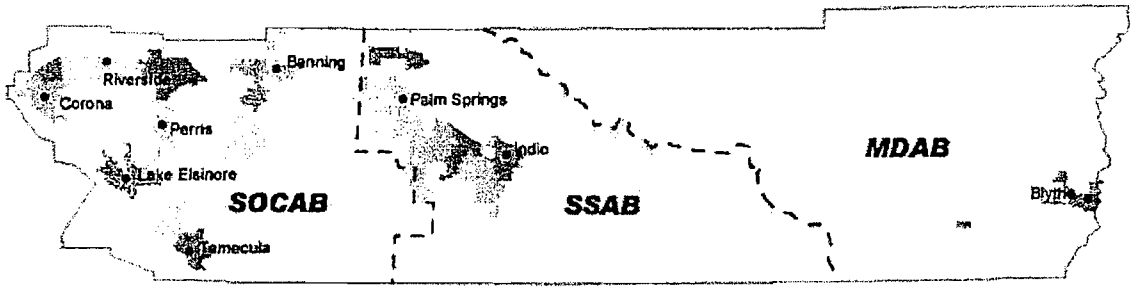
The SOCAB, SSAB and MDAB are all designated as attainment areas for both federal and state lead standards.

Particulate Matter

Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles (larger than 2.5 but smaller than 10 micrometers, or PM_{10}) come from a variety of sources, including windblown dust and grinding operations. Fine particles (less than 2.5 micrometers, or $PM_{2.5}$) often come from fuel combustion, power plants and diesel buses and trucks. Fine particles can also be formed in the atmosphere through chemical reactions. PM_{10} and its health affects are discussed in greater detail later in the Particulate Matter section of this Element.

The SOCAB and SSAB are designated as non-attainment areas for both state and federal PM_{10}. The MDAB is designated as a non-attainment area for state PM_{10} standards, but as an attainment unclassified area for Federal standards (after meeting attainment standards, the MDAQMD discontinued monitoring efforts; consequently it cannot be given full attainment status).

The following table summarizes the attainment status for these six pollutants within each of the three air quality basins covering Riverside County.



Air Basin Boundary

SOCAB - South Coast Air Basin
SSAB - Salton Sea Air Basin
MDAB - Mojave Desert Air Basin

Source Information: SCAQMD
The oldest data shown on this map is 1990

0 20 Miles

RIVERSIDE COUNTY AIR QUALITY BASINS

Figure AQ-1

Riverside County has made great strides in achieving state and federal air quality standards. The following provides a description of the six criteria air pollutants and their attainment status in each of the three Riverside County air basins.

Ozone

Ozone is a pungent, colorless gas typical of southern California smog. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. Ozone levels peak during the summer and early fall months.

The SOCAB is designated as a non-attainment area for both federal and state ozone standards, meaning that air quality standards are being exceeded. The Environmental Protection Agency (EPA) has classified the entire Southern California Association of Governments region as an "extreme" non-attainment area, and has mandated that the South Coast Air Quality Basin achieve attainment by 2010. The SSAB and MDAB are both designated as non-attainment areas for federal and state ozone standards.

Carbon Monoxide

Carbon monoxide (CO) is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue and impairments to central nervous system functions.

The SOCAB is designated as a non-attainment area for federal CO standards. However, the Riverside County area of SOCAB has not exceeded either federal or state CO standards in the past five years. The SSAB and MDAB have both been designated as attainment areas for federal and state Carbon Monoxide standards.

Nitrogen Oxides

Nitrogen dioxide (NO_2), a reddish brown gas, and nitric oxide (NO), a colorless odorless gas, are jointly referred to as nitrogen oxides or NO_x. NO_x is a primary component of smog and also contributes to other pollution problems such as high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 decreases lung function and may reduce resistance to infection.

The SOCAB has not exceeded either federal or state standards for nitrogen dioxides in the past five years. It is designated as a maintenance area (an area that was once classified as non-attainment but has recently shown achievement of air quality standards) under federal standards and as an attainment area under state standards. The SSAB and MDAB are designated as attainment areas for both federal and state NO_2 standards.

Sulfur Dioxide

Sulfur dioxide (SO_2) is a colorless irritating gas created mainly by industrial facilities. SO_2 irritates the respiratory tract, injures lung tissue when combined with fine particulate matter and reduces visibility and the level of sunlight.

The SOCAB, SSAB and MDAB are all designated as attainment areas for both federal and state sulfur dioxide standards.

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Issues and Policies

AIR QUALITY

"Air quality is viewed as such an important factor in the quality of life that its measurements are used as a major factor in evaluating the Plan's performance."

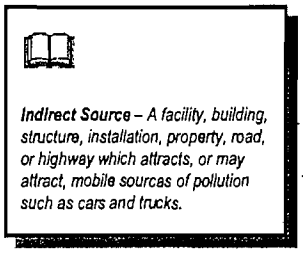
– RCIP Vision

Six criteria air pollutants have been established for every air basin within the State of California. These are pollutants for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set. As shown in Table AQ-1, Ambient Air Quality Standards, federal and state standards have been developed for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide and PM_{10}. Federal primary standards for air pollutants have been established to protect the public health, while secondary standards protect the public welfare by preventing impairment of visibility and damage to vegetation and property.

Table AQ-1
Ambient Air Quality Standards

Pollutant	Averaging Time	State	Federal	
			Primary	Secondary
Ozone	1 Hour	0.09 ppm	0.12 ppm	Same as Primary Standard
	8 Hour	0.08 ppm	0.08 ppm	
Nitrogen Dioxide	Annual Average	0.053 ppm	0.053 ppm	Same as Primary Standard
	1 Hour	0.25 ppm	–	
Carbon Monoxide	8 Hour	9.0 ppm	9.0 ppm	–
	1 Hour	20.0 ppm	35.0 ppm	–
Suspended Particulate Matter (PM_{10} & $PM_{2.5}$)	Annual Geometric Mean	30 $\mu g/m^3$	65 $\mu g/m^3$ ($PM_{2.5}$)	–
	24 Hour	50 $\mu g/m^3$	150 $\mu g/m^3$ (PM_{10}) 15 $\mu g/m^3$ ($PM_{2.5}$)	Same as Primary Standard
	Annual Arithmetic Mean	--	50 $\mu g/m^3$	
Sulfur Dioxide	Annual Average	--	0.03 ppm	Same as Primary Standard
	24 Hour	0.04 ppm	0.14 ppm	
	3 Hour	--	--	0.5 ppm
	1 Hour	0.25 ppm	–	–
Lead	30 Day Average	1.5 $\mu g/m^3$	--	--
	Calendar Quarter	--	1.5 $\mu g/m^3$	Same as Primary Standard

Notes: ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter of air
Source: California Air Resources Board Fact Sheet 39, 1998.



Indirect Source *– A facility, building, structure, installation, property, road, or highway which attracts, or may attract, mobile sources of pollution such as cars and trucks.*

To achieve the goals and objectives of the air quality plans at the local level, all cities and counties must adopt air quality elements or other elements/plans that fully address air quality as well as implement these plans to achieve compliance with state and federal standards. Local responsibilities for achieving compliance primarily focus on measures that control "Indirect Sources" such as facilities, buildings, structures, installations, real property, roads or highways that attract mobile sources of pollution.

Regulatory Restrictions

The combination of geographical features and high levels of pollutants produced in the region have resulted in the Environmental Protection Agency (EPA) designating the air basins in Riverside County as non-attainment areas (Table AQ-2). This means that due to the high level of pollutants in the region, the area is not expected to meet National Ambient Air Quality Standards in the near future.

The Federal Clean Air Act (1977 Amendments) requires that designated agencies in any region of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards by December 31, 1987. In response, the Governor of California designated agencies to develop these plans.

For the South Coast Air Basin and the Salton Sea Air Basin, the agencies designated to develop regional air quality plans are the South Coast Air Quality Management District (SCAQMD) and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and have revised it several times subsequently, as earlier attainment forecasts were shown to be overly optimistic. Equivalent regional air quality plans were created for the Mojave Desert Air Basin by the Mojave Desert Air Quality Management Basin (MDAQMD) in conjunction with SCAG.

In 1998, the California Legislature enacted the California Clean Air Act (CCAA). The CCAA requires regional emissions to be reduced by 5% per year, averaged over a 3-year period, until attainment can be demonstrated. Each region that did not meet a national or state air quality standard was required to prepare a plan which demonstrated how the 5% reductions were to be achieved. In response, the SCAQMD and MDAQMD revised their air quality plans to meet CCAA requirements.

The latest AQMP, approved in 1997, was designed to meet both federal and state air quality planning guidelines. Strategies for controlling air pollutant emissions in the AQMP are grouped into three "tiers," based on their anticipated timing for implementation. Tier I consists of the implementation of best available current technology and management practices that can be adopted within five years. Tier II is based on anticipated advancement in current technology and vigorous regulatory action, while Tier III controls consist of implementation measures which first require the development of new technologies.

The MDAQMD adopted its Air Quality Attainment Plan in 1995 to meet state ozone standards and the Attainment Demonstration Plan in 1996 to meet federal ozone standards. While the Mojave Desert Air Basin is classified by the state as a non-attainment area for PM_{10} (coarse particles larger than 2.5 but smaller than 10 micrometers), state law does not require an air quality plan to meet this standard, and as such, no plan has been adopted.

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MOJAVE DESERT AIR BASIN

The Mojave Desert Air Basin (MDAB), comprised of 21,000 square miles, encompasses the eastern portion of Riverside County consisting of the Palo Verde Valley along with portions of Los Angeles, Kern and San Bernardino Counties. Air quality conditions in the Riverside County MDAB are partly under the jurisdiction of the SCAQMD and partly under the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD).

The MDAB consists of an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains that dot the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the presence of the Sierra Nevada mountains, which pose as a natural barrier to the north; air masses pushed onshore in southern California by differential heating are channeled through the MDAB. The MDAB is separated from the southern California coastal and central California valley regions by mountains whose passes form the main channels for these air masses.

During the summer months, the MDAB is generally influenced by a Pacific Subtropical High Cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, with desert moisture arriving from infrequent warm, moist and unstable air masses from the south. The MDAB averages between three and seven inches of precipitation per year.

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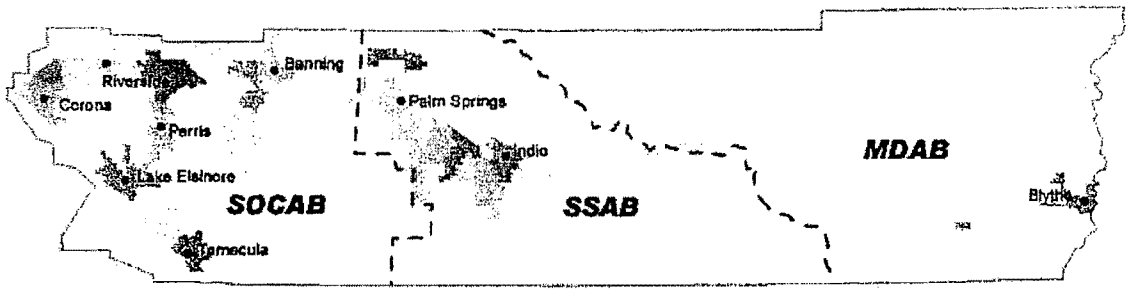

Source Information: SCAQMD.
The oldest data shown on this map is 1990.

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Air Basin Boundary

SOCAB - South Coast Air Basin
SSAB - Salton Sea Air Basin
MDAB - Mojave Desert Air Basin

0 20 Miles

RIVERSIDE COUNTY AIR QUALITY BASINS

Figure AQ-1

This phenomenon is frequently observed in the middle of late afternoon on hot summer days when the smog appears to clear up suddenly. Winter inversions frequently break by mid-morning, thereby preventing contaminant build-up.

The combination of low wind speeds and low level inversions produces the greatest concentration of pollutants. On high wind days other air pollutants including particulate matter such as dust and soil are swept and carried in the air. On days of no inversion or on days of winds averaging over 15 miles per hour, there will be no important smog effects, during either summer or winter.

Smog - A combination of smoke, ozone, hydrocarbons, nitrogen oxides, and other chemically reactive compounds which, under certain conditions of weather and sunlight, may result in a murky brown haze that causes adverse health effects. The primary source of smog in California is motor vehicles.

In the winter, the greatest pollution problems are carbon monoxide and oxides of nitrogen because of extremely low level inversions and air stagnation during the night and early morning hours. Smog levels are much lower during this season due to the lack of strong inversion during the daylight hours and the lack of intense sunlight which is needed to produce photochemical reactions.

In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and oxides of nitrogen to form more smog. Carbon monoxide is not as great a problem in summer because inversions are not as low and intense in the surface boundary layer (within 100 feet of the ground) as in winter and because horizontal ventilation is better in summer.

The basin-wide average occurrence of inversion at the ground surface is 11 days per month; the averages vary from two days in June to 22 days in December and January. The potential for high concentration varies seasonally for many contaminants. During late spring, summer and early fall, light winds, low mixing heights and brilliant sunshine combine to produce conditions favorable for the maximum production of photochemical oxidants, mainly ozone. During the spring and summer, when fairly deep marine layers are frequently found in the Basin, sulfate concentrations are at their peak.

SALTON SEA AIR BASIN

Subtropical High Cell - An area of atmospheric high pressure located at approximately 30 degrees north and south latitude. Air tends to sink near high-pressure centers, which inhibits precipitation and cloud formation. This is why high-pressure systems tend to bring bright, sunny days with calm weather.

The middle part of Riverside County (between San Gorgonio Pass and Joshua Tree National Monument), belongs in the Salton Sea Air Basin (SSAB), along with Imperial County. Air quality conditions in this portion of the County, although in the SSAB, are also administered by the SCAQMD. The SCAQMD is responsible for the development of the regional Air Quality Management Plan and efforts to regulate pollutant emissions from a variety of sources.

The SSAB portion of Riverside County is separated from the SOCAB region by the San Jacinto Mountains and from the Mojave Desert Air Basin to the east by the Little San Bernardino Mountains. During the summer, the SSAB is generally influenced by a Pacific Subtropical High Cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The SSAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist and unstable air masses from the south. The SSAB averages between three and seven inches of precipitation per year.

The Setting

Riverside County is located within three air basins, as can be seen on Figure AQ-1, Riverside County Air Quality Basins They are the South Coast Air Basin (SOCAB), Salton Sea Air Basin (SSAB) and the Mojave Desert Air Basin (MDAB). Air quality within each basin is not only affected by various emissions sources (mobile, industry, etc.), but also by atmospheric conditions such as wind speed, wind direction, temperature and rainfall. The following provides a description of each air basin and its relevant climate and meteorological conditions affecting air pollution.

SOUTH COAST AIR BASIN

Western Riverside County (west of the San Gorgonio Pass) is located within the South Coast Air Basin (SOCAB), which includes all of Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino Counties. Air quality conditions in the SOCAB are under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

According to the Air Quality Management Plan (AQMP), the worst air quality problem in the nation occurs in the South Coast Air Basin. With very light average wind speeds, the basin atmosphere has a limited capability to disperse air contaminants horizontally. The dominant daily wind pattern is a daytime sea breeze (onshore breeze) and a nighttime land breeze (offshore breeze), broken only occasionally by winter storms and infrequent strong Santa Ana winds from the Great Basin, Mojave, and deserts to the north.

Santa Ana Winds - Santa Ana winds are generally defined as warm, dry winds that blow from the east or northeast (offshore) occurring predominantly between the months of December and February. The winds develop when a region of high pressure builds over the Great Basin (the high plateau east of the Sierra Mountains and west of the Rocky Mountains including most of Nevada and Utah) and move locally across the Mojave Desert and then over and through passes in the San Gabriel, San Bernardino and San Jacinto Mountains.

On virtually all spring and early summer days, most of the pollution produced during an individual day is moved out of the basin through mountain passes, or is lifted by the warm, vertical currents produced by the heating of mountain slopes. In those seasons, the basin can be "flushed" of pollutants by a transport of ocean air during the afternoon. From late summer through the winter months, the flushing is less pronounced because of lower wind speeds and the earlier appearance of offshore winds. With extremely stagnant wind flows, the drainage winds may begin near the mountains by late afternoon. Remaining pollutants are trapped and begin to accumulate during the night and the following morning. A low average morning wind speed in pollution source areas is an important indicator of air stagnation potential.

The vertical dispersion of air pollutants in the South Coast Air Basin is hampered by the presence of a temperature inversion in the layers of the atmosphere near the surface of the Earth. In a normal situation, as temperatures decrease with altitude, air continues to rise as it remains warmer than the surrounding air. With an inversion layer, air cannot continue to expand upwards, as it is trapped by the warmer air above.

Inversion layer - A layer of warm air that traps the cooler air and any pollutants it carries below.

However, as the day progresses and the sun warms the ground, the surface layer of air approaches a temperature equal to that of the inversion layer. When these temperatures become equal, the inversion layer begins to erode at its lower edge. If enough warming takes place, the inversion layer becomes weaker and weaker and finally "breaks." The surface air layers can then mix upward without limit.

Ambient Air - Outside air, any portion of the atmosphere not contained by walls and a roof.

It is an intent of this Air Quality Element to provide background information on the physical and regulatory environment affecting air quality in the County. This element also identifies goals, policies and programs that are meant to balance the County's actions regarding land use, circulation and other issues with their potential effects on air quality. This element in conjunction with local and regional air quality planning efforts addresses ambient air quality standards set forth by the Federal Environmental Protection Agency and the California Air Resources Board (CARB).

Chapter 9: Air Quality Element

Introduction

WHY IS AIR QUALITY IMPORTANT?

> *Air quality attainment goals established by the South Coast Air Quality Management District have been more than met despite the substantial growth in the region in the last 20 years. Most of this is a result of significantly improved engine technology and the replacement of more polluting vehicles. However, local initiatives that expanded transit options, concentrated development more efficiently, and increased local employment opportunities have also contnbuted to air quality improvement.*
>
> *– RCIP Vision*

The quality of the air we breathe directly affects our health, environment, economy and our quality of life. Because the inside of our bodies are in constant contact with the outside world through the oxygen we inhale, air pollutants make their way to our lungs and into our blood stream. An overabundance of pollutants in the air can cause mild to severe health effects, including increased hospitalization and emergency room visits, respiratory illnesses, increased risk of developing cancer, decreased breathing capacity, lung inflammation, difficulty in exercising and even a reduction in life-span.

Just as we are affected by air pollution, so too are plants and animals. Animals must breathe the same air and are subject to the same types of negative health effects. Certain plants and trees may absorb air pollutants which can stunt their development or cause premature death. There are also numerous impacts to our economy including lost work days due to illness, a desire on the part of business to locate in areas with a healthy environment, and increased expenses from medical costs. Pollutants may also lower visibility and cause damage to property Certain air pollutants are responsible for discoloring painted surfaces, eating away at stones used in buildings, dissolving the mortar that holds bricks together, and cracking tires and other items made from rubber.

WHAT CAN WE DO ABOUT AIR QUALITY?

Air quality is a regional issue, effecting and affected by every city and county. Although Riverside County generates the lowest emissions of any county in the South Coast Air Basin, air quality in the County is among the Basin's worst due to onshore winds transporting vast amounts of pollutants from Los Angeles and Orange Counties into the Inland Empire.

While the County and the region have made great strides in reducing air pollution, it is committed to meeting state and federal air quality guidelines. Policies and programs addressed in this element will focus on the two main sources of air pollutant emissions: mobile sources and stationary sources. Mobile sources include automobiles, motorcycles, trucks and airplanes. Motor vehicles constitute the largest generator of air pollutant emissions in Riverside County. Stationary sources produce significant amounts of pollutants and include electrical power-generating facilities, manufacturing, fabrication, miscellaneous industrial processes and combustion of natural gas.

9. Air Quality Element

AIR QUALITY ELEMENT

EXAMPLE #2

COUNTY OF RIVERSIDE

TOPIC 5: PARTICULATE EMISSIONS

GOAL	POLICIES	PROGRAMS AND ACTION OPTIONS
The minimum practicable particulate emissions from the construction and operation of roads and buildings.	Control Dust 1. Reduce particulate emissions from roads, parking lots, construction sites and agricultural lands.	1. Adopt incentives, regulations and procedures to manage paved roads so that they produce the minimum practicable level of particulates (12a). 2. Adopt incentives, regulations and procedures to minimize particulate emissions during road, parking lot and building construction (I-4). 3. Adopt incentives, regulations and procedures to control particulate emissions from unpaved roads, drives, vehicle maneuvering areas and parking lots (12b). 4. Adopt incentives, regulations and procedures to limit dust from agricultural lands and operations (where applicable) (E-3).
	Reduce Emissions from Building Materials/Methods 2. Reduce emissions from building materials and methods which generate excessive pollutants.	1. Adopt incentives, regulations and procedures to prohibit the use of building materials and methods which generate excessive pollutants (F-9).

TOPIC 6: ENERGY CONSERVATION

GOAL	POLICIES	PROGRAMS AND ACTION OPTIONS
Reduced emissions through reduced energy consumption.	Energy Conservation 1. Reduce energy consumption through conservation improvements and requirements.	1. Implement plans and programs to phase in energy conservation improvements through the annual budget process (18a). 2. Adopt incentives and regulations to enact energy conservation requirements for private development.
	Limit Water Heater Emissions 2. Reduce water heating emissions resulting from swimming pool heaters and residential and commercial water heaters.	1. Adopt incentives and regulations to reduce emissions from swimming pool heaters (d-4). 2. Adopt incentives and regulations to reduce emissions from residential and commercial water heating (d-5).
	Recycle Wastes 3. Promote local recycling of wastes and use of recycled materials.	1. Implement provisions of AB 939 and adopt incentives, regulations and procedures to specify local recycling requirements (18b).

TOPIC 4: LAND USE		
GOAL	**POLICIES**	**PROGRAMS AND ACTION OPTIONS**
	Protect Sensitive Receptors 3. Support a regional approach to regulating the location and design of land uses which are especially sensitive to air pollution.	1. Participate with the SCAQMD in jointly formulating appropriate standards for regulating the location and protection of sensitive receptors (schools, day care facilities, hospitals and the like) from excessive and hazardous emissions.
	Integrated Planning Process 4. Integrate air quality planning with the land use and transportation planning processes.	1. Locate and design new development in a manner that will minimize direct and indirect emission of air contaminants through such means as: • Promoting mixed use development to reduce the length and frequency of vehicle trips. • Providing for increased intensity of development along existing and proposed transit corridors. • Providing for the location of ancillary employee services (including, but not limited to child care, restaurants, banking facilities, convenience markets) at major employment centers for the purpose of reducing midday vehicle trips.

TOPIC 4: LAND USE		
GOAL	**POLICIES**	**PROGRAMS AND ACTION OPTIONS**
A pattern of land uses which can be efficiently served by a diversified transportation system and land development projects which directly and indirectly generate the minimum feasible air pollutants (17).	Manage Growth 1. Manage growth by insuring the timely provision of infrastructure to serve new development.	1. Incorporate phasing policies and requirements in general plans and development plans to achieve timely provision of infrastructure (particularly transportation facilities) to serve development through: • Tying growth to Level of Service (LOS) standards; and • Using Urban Limit Lines or phasing areas to manage growth.
	Balance Growth 2. Improve the balance between housing and jobs in order to create a more efficient urban form.	1. Improve jobs/housing relationships through new development and redevelopment project reviews and actions through: • Project review procedures, ensuring that individual projects have a positive or neutral impact on housing/jobs balance; • Revising the General Plan Land Use designations; • Revising the Zoning Code; • Imposing exactions or linkage fees on projects which negatively impact housing/jobs balance; • "Fast-Tracking" projects which improve jobs/housing balance; • Project review procedures, ensuring that site design allows for alternative modes of transportation (bus stops, bus turnouts, bikeways, pedestrian routes, etc.); • Phasing growth to ensure that job expansion and housing production occur at a targeted pace; • Indexing residential development in housing-rich areas to commercial/industrial construction or availability; • Encouraging/allowing mixed use development; • Providing density/intensity bonuses to projects which improve housing/jobs balance; • Encouraging/allowing Planned Unit Development; • Giving incentives for employer-provided housing; • Providing subsidies to attract new businesses; • Utilizing tax exempt bond financing to encourage job-creating businesses; and • Providing infrastructure improvements and/or land for industrial and commercial development. 2. Improve jobs/housing relationships at a subregional level in relation to major activity centers as new development occurs by: • Allowing/encouraging intensified development around transit nodes and along transit corridors; and • Using an urban limit lines or phasing areas to manage growth; 3. Continue support for and consider expansion of the CLOUT demonstration project to incorporate: incentive oriented tax credits; loan programs; small business development programs; and complementary land use policies, all aimed at improving the housing/jobs balance in the western San Bernardino/eastern Los Angeles Counties area. 4. Develop and adopt an agreement among the participating jurisdictions as to mutually acceptable approaches to improve and maintain housing/jobs balance.

TOPIC 3: AIR TRANSPORTATION		
GOAL	**POLICIES**	**PROGRAMS AND ACTION OPTIONS**
Minimum feasible emissions from air carrier airports.	Promote Improved Technology 1. Promote requiring the best available technology to reduce emissions in aircraft fleet.	1. Adopt/urge establishment of the best available technology and operational measures for aircraft and ground service vehicles (6). 2 Support phasing out of Stage II aircraft and the earliest possible transition to Stage III aircraft for operation within the Air Basin (9).
	Promote Centralized Ground Power 2. Promote installation of centralized ground power systems at existing air carrier airports.	1. Adopt/urge establishment of requirements for centralized ground power systems to be installed and used as soon as practicable at existing air carrier airports (7).
	Promote Improved Ground Access 3. Promote conditioning of air carrier airports upon inclusion of plans for improved ground access.	1. Adopt/urge establishment of an ordinance requiring air carrier airport operators to obtain permits based on approved plans for trip reduction, facility design and access improvements (8).

Health Effects of Ambient Air Pollutants

Ozone

Ozone is a strong irritant that can constrict the airways, forcing the respiratory system to work hard to deliver oxygen. Individuals exercising outdoors, children and people with pre-existing lung disease such as asthma and chronic pulmonary lung disease are considered to be the most susceptible to the health effects of ozone. Short term exposure (lasting for a few hours) to ozone at levels typically observed in Southern California can result in aggravated respiratory diseases such as emphysema, bronchitis and asthma, shortness of breath, increased susceptibility to infections, inflammation of the lung tissue, increased fatigue as well as chest pain, dry throat, headache and nausea.

Elevated ozone levels are associated with increased school absences. In recent years, a correlation between elevated ambient ozone levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in high ozone communities.

Ozone exposure under exercising conditions is known to increase the severity of the above mentioned observed responses. Animal studies suggest that exposures to a combination of pollutants which include ozone may be more toxic than exposure to ozone alone. Although lung volume and resistance changes observed after a single exposure diminish, with repeated exposures biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

Particulate Matter

A series of scientific studies has linked particulate matter, especially fine particles, with a variety of significant health problems. A consistent correlation between elevated ambient fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections number and severity of asthma attacks, and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life-span, and an increased mortality from lung cancer.

Daily fluctuations in fine particulate matter concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long-term exposure to particulate

APPENDIX C

HEALTH EFFECTS

OF

AMBIENT AIR POLLUTANTS

Ambient Air Quality Standards

AIR POLLUTANT	STATE STANDARD CONCENTRATION/ AVERAGING TIME	FEDERAL PRIMARY STANDARD CONCENTRATION/ AVERAGING TIME	MOST RELEVANT EFFECTS
Ozone	0.09 ppm, 1-hr. avg. >	0.12 ppm, 1-hr avg.> 0.08 ppm, 8-hr avg.>	(a) Short-term exposures: (1) Pulmonary function decrements and breathing difficulty. (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; (d) Property damage
Carbon Monoxide	9.0 ppm, 8-hr avg. > 20 ppm, 1-hr avg. >	9 ppm, 8-hr avg.> 35 ppm, 1-hr avg.>	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses
Nitrogen Dioxide	0.25 ppm, 1-hr avg. >	0.053 ppm, ann. avg.>	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration
Sulfur Dioxide	0.04 ppm, 24-hr avg.> 0.25 ppm, 1-hr. avg. >	0.03 ppm, ann. avg.> 0.14 ppm, 24-hr avg.>	(a) Broncho constriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma
Suspended Particulate Matter (PM_{10})	20 µg/m3, ann. geometric mean > 50 µg/m3, 24-hr average>	50 µg/m3, ann. arithmetic mean > 150µg/m3, 24-hr avg.>	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Declines in pulmonary function, especially in children; (c) Increased risk of premature death from heart or lung diseases in elderly
Suspended Particulate Matter ($PM_{2.5}$)	12 µg/m3, ann. arithmetic mean	15 µg/m3, ann. arithmetic mean > 65 µg/m3, 24-hr avg.>	
Sulfates	25 µg/m3, 24-hr avg. ≥		(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage
Lead	1.5 µg/m3, 30-day avg. ≥	1.5 µg/m3, calendar quarter>	(a) Learning disabilities in children; (b) Impairment of blood formation and nerve conduction
Visibility-Reducing Particles	In sufficient amount such that the extinction coefficient is greater than 0.23 inverse kilometers (to reduce the visual range to less than 10 miles) at relative humidity less than 70 percent, 8-hour average (10am - 6pm)		Visibility impairment on days when relative humidity is less than 70 percent
Hydrogen Sulfide (H_2S)	0.03 ppm, 1-hr. avg. ≥		Odor (rotten egg smell) Headache

Source: South Coast Air Quality Management District

APPENDIX B

AMBIENT AIR QUALITY STANDARDS

AQ 17.6 Reduce emissions from building materials and methods that generate excessive pollutants, through incentives and/or regulations.

AQ 17.7 Separate trucks from other vehicles in industrial areas of the County with the creation of truck-only access lanes to promote the free flow of traffic. (AI 43)

AQ 17.8 Adopt regulations and programs necessary to meet state and federal guidelines for diesel emissions. (AI 121)

AQ 17.9 Encourage the installation and use of electric service units at truck stops and distribution centers for heating and cooling truck cabs, and particularly for powering refrigeration trucks in lieu of idling of engines for power. (AI 120)

AQ 17.10 Promote and encourage the use of natural gas and electric vehicles in distribution centers.

AQ 17.11 Create and implement street-sweeping plans, as appropriate, in areas of the County disproportionately affected by particulate matter pollution.

Multi-jurisdictional Cooperation

Particulate matter concentrations are a regional issue. In addition to those created in Riverside County, particulates originating in surrounding cities and counties are transported into Riverside County by prevailing winds. Therefore, any meaningful attempt to decrease particulate concentrations in the County will involve cooperation with local and regional governments and a tightening of state and federal standards.

Policies:

AQ 16.1 Cooperate with local, regional, state and federal jurisdictions to better control particulate matter.

AQ 16.2 Encourage stricter state and federal legislation on bias belted tires, smoking vehicles, and vehicles that spill debris on streets and highways, to better control particulate matter. (AI 113)

AQ 16.3 Collaborate with the SCAQMD and MDAQMD to require and/or encourage the adoption of regulations or incentives to limit the amount of time trucks may idle. (AI 120)

AQ 16.4 Collaborate with the EPA, SCAQMD, MDAQMD, and warehouse owners and operators to create regulations and programs to reduce the amount of diesel fumes released due to warehousing operations. (AI 121)

Control Measures

Riverside County can implement simple control measures to reduce the amount of particulates produced within its borders. Strict enforcement of these and current regulations can then lead to a substantial decrease in particulate concentrations in the County and neighboring areas.

Policies:

AQ 17.1 Reduce particulate matter from agriculture, construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights-of-way, and off-road vehicles to the extent possible. (AI 123)

AQ 17.2 Enforce regulations against illegal fires.

AQ 17.3 Identify and create a control plan for areas within the County prone to wind erosion of soil.

AQ 17.4 Adopt incentives, regulations and/or procedures to manage paved and unpaved roads and parking lots so they produce the minimum practicable level of particulates (AI 111)

AQ 17.5 Adopt incentives and/or procedures to limit dust from agricultural lands and operations, where applicable. (AI 123)

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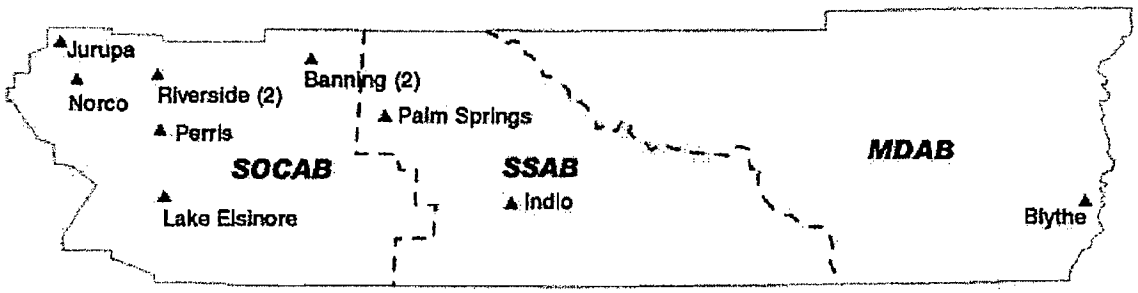


▲ Monitoring Sites

Air Basin Boundary

SOCAB - South Coast Air Basin
SSAB - Salton Sea Air Basin
MDAB - Mojave Desert Air Basin

Source Information: SCAQMD.
The oldest data shown on this map is 1990.

0 20 Miles

RIVERSIDE COUNTY AIR MONITORING NETWORK

Figure AQ-2

precipitates rather than dust, smoke or soot. Riverside County is also responsible for generating large amounts of particulate matter from sources such as agriculture, warehousing operations, and truck traffic.

While Riverside County is dedicated to implementing policies to control particulate matter produced within its own boundaries, it has no control over particulate imported from beyond its boundaries. The solution to the problem of imported particulate matter in western Riverside County is the adoption of adequate control measures by those responsible jurisdictions in Los Angeles and Orange Counties. By adhering to the control measures contained in the AQMP, these jurisdictions can have a positive impact on particulate matter pollution in the SOCAB portion of Riverside County.

The air quality concerns in the Salton Sea Air Basin (SSAB) portions of the County differ somewhat from those in western Riverside County. Unlike the SOCAB region, particulates in SSAB are primarily dust, smoke and soot. While in 1993 and 1994, PM_{10} concentrations were under the federal standard, concentrations in 1995 were slightly above federal limits. The maximum annual average PM_{10} concentration in 1995 was recorded at 4% above the federal standard; however, the measurement included one day with high winds without which the SSAB would have been under the federal standard. The far more stringent state standards were exceeded on 44% of the days in 1995.

The Mojave Desert Air Basin (MDAB), like the SOCAB and SSAB, is designated as a non-attainment area for PM_{10}. Particulates in the MDAB are primarily fugitive caused by high winds or vehicle travel on unpaved roads. Particulates in the area are generally not caused by exhaust stacks or primary emission points.

While sources and severity of particulate pollution differ in subareas of the County, it is the County's objective to control particulate matter throughout all of Riverside County. However, where necessary, the County shall tailor its control measures and implementation procedures to best address the unique situations found in each area. One example of such an area is the Mira Loma community, where particulate pollutant levels are among the worst in the nation. In such an area, strong measures must be taken immediately to protect the health and welfare of residents, especially children, the elderly and those with respiratory illnesses.

Monitoring

Air quality monitoring stations are locating throughout Riverside County (Figure AQ-2). However, at times it may be necessary to locate additional monitors in those areas of the County suspected of producing excessively high levels of particulates. This more localized data may then assist control and law enforcement efforts in reducing and minimizing particulate matter levels.

Policies:

AQ 15.1 Identify and monitor sources, enforce existing regulations, and promote stronger controls to reduce particulate matter.

pedestrian overpasses, and bus turnouts. These projects improve mobility and air quality by encouraging efficient transportation use.

Policies:

AQ 14.1 Emphasize the use of high occupancy vehicle lanes, light rail and bus routes, and pedestrian and bicycle facilities when using transportation facility development to improve mobility and air quality.

AQ 14.2 When developing new capital facility improvement plans, also consider measures such as Transportation Demand Management, Transportation Systems Management, or job/housing balance strategies.

AQ 14.3 Monitor traffic and congestion to determine when and where the County needs new transportation facilities to achieve increased mobility efficiency.

AQ 14.4 Preserve transportation corridors with the potential of high demand or of regional significance for future expansion to meet project demand. (AI 53)

PARTICULATE MATTER

The Environmental Protection Agency (EPA) defines particulate matter (PM) as either airborne photochemical precipitates or windborne dust. Consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols, common sources of PM are manufacturing and power plants, agriculture, diesel trucks and other vehicles, construction sites, fire and windblown dust. Generally PM settles from atmospheric suspension as either particulate or acid rain and fog that has the potential to damage health, crops, and property. Particulate of 2.5 microns or smaller (2.5 microns is approximately equal to .000098 inches) may stay suspended in the air for longer periods of time and when inhaled can penetrate deep into the lungs. Among the health effects related to $PM_{2.5}$ are premature death, decreased lung function and exacerbation of asthma and other respiratory tract illnesses.

Particulate sized between 2.5 and 10 microns (10 microns is approximately equal to .0004 inches), known as PM_{10} also pose a great risk to human health. PM_{10} can easily enter the air sacs in the lungs where they may be deposited, resulting in an increased risk of developing cancer, potentially changing lung function and structure, and possibly exacerbating preexisting respiratory and cardiovascular diseases. It can also irritate the eyes, damage sensitive tissues, sometimes carry disease, and may even cause premature death. $PM_{2.5}$ and PM_{10} are especially hazardous to the old, young and infirm.

Although it produces less than 10% of the South Coast Air Basin's particulate matter, western Riverside County, which is part of the SOCAB, exceeds federal standards more than any other urban area in the nation, and has the highest particulate concentration in the SOCAB. These high levels of particulate matter are largely imported from the urbanized portions of Los Angeles and Orange Counties. This imported particulate is generally composed of photochemical

AQ 13.3 Encourage the construction of high-occupancy-vehicle (HOV) lanes whenever possible to relieve congestion, safety hazards and air pollution as described in the AQMP.

TRANSPORTATION FACILITY DEVELOPMENT

Please see the General Plan Circulation Element, Planned Circulation Systems section for additional information and policies.

Regionally, transportation facility development means increasing capacity through the expansion of highway and transit systems to meet population and land use demand. Though major construction projects often require massive capital investment, mobility and capacity are increased. These projects include: major highways in high growth regions, construction of high occupancy vehicle (HOV) lanes where severe traffic problems occur, and the construction of rapid transit corridors and facilities. Unfortunately, this strategy responds slowly to changing demands on the transportation system and may burden the region with debt.

Estimates for the development of additional facilities and systems over the next twenty years call for billions of dollars in investment. While federal government spending will account for a large portion of the funding required, additional revenues will have to be raised through a variety of means, including the gas tax, sales tax, user fees, tolls and bonds.

The costs of regional transportation projects also include growth in population, housing and services, and their impact on the transportation system. This raises traffic volume to or above the system's designed capacity while decaying air quality. When major transit corridors become congested, for example, daily commuters take alternate routes to avoid traffic delays. Once a new route becomes operational, commuters abandon these alternative routes for the new or improved systems until they too become congested. However, trying to build out of this situation does not solve the problem because it fuels an unbridled cycle of more growth, traffic, transportation facility development and smog. Continued transportation facility development results in increased growth, higher taxes, and minimal net gains in mobility for each dollar spent. All of this only lessens the chances for good air quality.

Just as there is a need regionally, capital improvements are also required locally to keep traffic moving and reduce emissions. It is the intent of the County to continue such improvements. However, the County recognizes that large construction projects are not always the best option for meeting transportation demands and that other, less expensive alternatives, are sometimes available. These alternatives include demand management, transportation systems management, and strategies to improve the job/housing ratio. While the County cannot meet all of its mobility and air pollution challenges using these alternatives, they may supplement needed capital improvements to help meet the County's transportation demands.

The transportation facility development required must improve mobility by encouraging multiple-occupancy vehicle use and alternative travel modes for both short and long trips. Therefore, the County must emphasize construction projects such as single purpose, high occupancy vehicle lanes, park-n-ride lots, light rail and bus routes. It should also give priority to bicycle paths and trails,

travel and idling time for cars, buses and trucks. Congestion increases transportation costs and vehicle emissions, and frays nerves. Moreover, a lack of fleets using alternative fuels adds to poor air quality.

Because transportation systems management provides an important weapon for relieving congestion, improving mobility, and enhancing air quality, the County should use it extensively in its fight for cleaner air.

Traffic Flow

It is a goal of the County to manage its transportation systems in a manner in which mobility and efficiency are enhanced. Improving the flow of traffic promotes mobility on our streets, resulting in decreased impacts on air quality.

Policies:

AQ 12.1 Manage traffic flow through signal synchronization, while coordinating with and permitting the free flow of mass transit vehicles, when possible. (AI 117)

AQ 12.2 Synchronize signals throughout the County with those of its cities, adjoining counties and the California Department of Transportation. (AI 117)

AQ 12.3 Construct and improve traffic signals with channelization and Automated Traffic Surveillance and Control systems at appropriate intersections (AI 117)

AQ 12.4 Eliminate traffic hazards and delays through highway maintenance, rapid emergency response, debris removal, and elimination of at-grade railroad crossings, when possible. (AI 119)

AQ 12.5 Encourage business owners to schedule deliveries at off-peak traffic periods.

Channelization - Involves the separation or regulation of conflicting traffic movements into definite paths of travel by traffic islands or pavement markings, to facilitate the safe and orderly movement of vehicles and pedestrians.

Transportation System Management Improvements

Proper management and oversight of the County-owned fleet can provide a highly effective tool for reducing direct and indirect impacts on air quality. It is therefore a goal of the County to continually improve its own transportation system and cooperate with officials in all levels of government to enhance regional efforts to improve transportation systems management.

Policies:

AQ 13.1 Manage the County of Riverside transportation fleet fueling standards to achieve an appropriate alternate fuel fleet mix. (AI 118)

AQ 13.2 Cooperate with local, regional, state, and federal jurisdictions to better manage transportation facilities and fleets.

High Occupancy Vehicles (HOV) Lanes -Carpools, vanpools, buses and motorcycles are the only vehicles allowed to use HOV lanes. Generally, HOV lanes require two-person carpools, though there are some roadways that require a minimum of three (with the exception of super-ultra-low-emission vehicles, which may use HOV lanes with only a single occupant).

AQ 10.2 Use incentives, regulations and Transportation Demand Management in cooperation with surrounding jurisdictions when possible to eliminate vehicle trips which would otherwise be made. (AI 47)

AQ 10.3 Assist merchants in encouraging their customers to shift from single occupancy vehicles to transit, carpools, bicycles, or foot. (AI 48)

AQ 10.4 Continue to enforce the County's Transportation Demand Management Ordinance and update as necessary.

Special Events

Temporary special events provide recreational and retail opportunities for residents. However, these events may also result in traffic congestion on roadways adjacent to the event. The following policies are designed to alleviate traffic congestion and the accompanying pollution caused by excess vehicle travel times.

Policies:

AQ 11.1 Establish requirements for special event centers to provide off-site parking and park-n-ride facilities at remote locations. Remote parking should be as close to practicable to the event site and the operator should supply shuttle services. (AI 116)

AQ 11.2 Promote the use of peripheral parking by increasing on-site parking rates and offering reduced rates to peripheral parking with tickets sold for non-ridesharing patrons. (AI 116)

AQ 11.3 Encourage special event center operators to advertise and offer discounted transit passes with event tickets (AI 116)

AQ 11.4 Encourage special event center operators to advertise and offer discount parking incentives to carpooling patrons, with two or more persons per vehicle, for on-site parking facilities. (AI 116)

TRANSPORTATION SYSTEMS MANAGEMENT

Transportation systems management improves traffic flow through modification in the operation of existing transit facilities and fleets. This increases mobility and thereby improves air quality. Commerce, industry and public welfare require adequate mobility. Poor transportation systems management, on the other hand, creates congested highways, perpetuates poorly maintained and polluting fleets, weakens the County's economy and diminishes its citizens' health and well-being.

An at-grade railroad crossing is one where the street and the rail line form an intersection, and physically cross one-another.

The County's rapidly growing population combined with unsynchronized traffic signals, delays at grade-level rail crossings, non-uniform street widths, inadequate roadway maintenance and poor emergency response, has resulted in increased congestion. Increased congestion means stop-and-go traffic and longer

vanpools, and to take the bus or light rail. Alternatively, workers may work longer hours and so eliminate a trip to the office once or twice a week. Two other TDM strategies that eliminate work trips are telecommuting and work-at-home programs. When individuals must drive, TDM calls for changes in their work schedules to avoid peak traffic periods. A similar TDM strategy encourages large trucks to operate at night. Because traffic at night is lighter, accidents are less likely, and when they do occur, they may not tie up the freeway for hours as they would during the day.

TDM strategies for reducing trips that are not work related are also important. Among these are merchant transportation incentives, such as discounts to customers who use public transit and free bus passes. Some measures reduce both work and non-work related trips. For example, by pricing parking spaces and providing convenient parking for people who rideshare, parking management encourages the use of carpools, vanpools and public transit. It also eliminates on-street parking which adds to congestion.

TDM alone, however, is not the answer. Transit improvements and facility development must accompany these changes. Efforts to encouraging a shift to transit will fail unless transit operators make convenient, safe and reliable transit service available. Similarly, a lack of work centers now blocks the development of telecommuting. The County can take steps to foster the development of such work centers. Changing transportation demand will also require facility development, such as park-n-ride lots, bus turnouts, off-site parking, and facilities for bicycles and pedestrians.

The County's Transportation Demand Management Ordinance for new developments, designed to meet the requirements of the Riverside County Congestion Management Program and the Air Quality Management Plan, promotes the development of TDM strategies early in the development review process. The ordinance sets goals for reducing vehicle trips generated by new developments, a minimum road level-of-service for all new development projects and a reduction in overall vehicle trips emanating from the County. This ordinance also establishes potential TDM measures to be used where appropriate including off-site telecommunications facilities, carpooling, alternative work schedules, transit ridership incentives, and an enhanced pedestrian and bikeway circulation system.

Trip Reduction

As the automobile is the major source of air pollution in the region, the County recognizes the importance of reducing the number of vehicle trips and miles traveled. Policies in this section are not intended to create additional regulation, but to create incentives to reduce vehicle trips, encourage alternative schedules and conform to policies created by regional governments.

Policies:

AQ 10.1 Encourage trip reduction plans to promote alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking. (AI 47)

Table AQ-4
Commute Distance by Home County

Home County	1992	1993	1994	1996	1998	1999
Los Angeles	15.8 miles	13.3 miles	15.3 miles	14.6 miles	15.3 miles	14.9 miles
Orange	14.9	14	15.8	15.7	14.2	16.1
Riverside	**20.9**	**22.8**	**22.2**	**24.1**	**21**	**21.6**
San Bernardino	20.4	20	21.3	25	22.4	21.3
Ventura	17.7	15.4	16.2	17.8	15.9	16.3
Imperial*	NA	NA	NA	11.8	12.1	14.5

* Imperial County was included for the first time in the 1996 study.
Source: 1999 SCAG State of the Commute Report

Table AQ-5
Commuting Time for Trip to Work by Home County

Home County	1992	1993	1994	1996	1998	1999
Los Angeles	37 minutes	33 minutes	30 minutes	33 minutes	31 minutes	34 minutes
Orange	32	29	30	30	31	33
Riverside	**38**	**37**	**36**	**38**	**36**	**37**
San Bernardino	35	36	36	38	37	35
Ventura	28	26	28	28	26	27
Imperial	NA	NA	NA	20	23	24

* Imperial County was included for the first time in the 1996 study.
Source: 1999 SCAG State of the Commute Report

Table AQ-6
Commuting Time for Return Trip Home by Home County

Home County	1992	1993	1994	1996	1998	1999
Los Angeles	42 minutes	36 minutes	34 minutes	36 minutes	38 minutes	41 minutes
Orange	35	34	38	37	34	41
Riverside	**41**	**43**	**43**	**46**	**40**	**38**
San Bernardino	42	39	42	47	39	41
Ventura	32	30	31	32	30	33
Imperial	NA	NA	NA	21	24	23

* Imperial County was included for the first time in the 1996 study.
Source: 1999 SCAG State of the Commute Report

Transportation Demand Management (TDM) - Low-cost ways to reduce demand by automobiles on transportation systems, such as programs to promote telecommuting, flextime and ridesharing.

Transportation Demand Management (TDM) can help unclog freeways and reduce commute times, thereby improving air quality. However, it means planning driving patterns to reduce the number of cars and trucks using the roads at any one time. This in the essence of TDM.

As stated in the Circulation Element, TDM strategies help reduce work-related trips by encouraging individuals who now drive alone to form carpools and

Please see the General Plan Land Use Element Land Use Designation Policies section and Appendix J, Community Center Guidelines for additional information.

AQ 8.5 Develop community centers in conformance with policies contained in the Land Use Element. (AI 14)

AQ 8.6 Encourage employment centers in close proximity to residential uses. (AI 14)

AQ 8.7 Implement zoning code provisions which encourage community centers, telecommuting and home-based businesses. (AI 1)

AQ 8.8 Promote land use patterns which reduce the number and length of motor vehicle trips. (AI 26)

Please see the General Plan Circulation Element Planned Circulation Systems section for further policies regarding alternative modes of travel.

AQ 8.9 Promote land use patterns that promote alternative modes of travel. (AI 26)

Multi-jurisdictional Coordination

The County of Riverside recognizes the regional context of the policies it creates. Because air pollutants do not recognize political boundaries, often the policies of one community may adversely impact residents of another. This is particularly true with respect to pollutants emitted by motor vehicles, which underscores the importance of regional and subregional cooperation.

Policies:

AQ 9.1 Cooperate with local, regional, state and federal jurisdictions to reduce vehicle miles traveled and motor vehicle emissions through job creation. (AI 18)

AQ 9.2 Attain performance goals and/or VMT reductions which are consistent with SCAG's Growth Management Plan. (AI 26)

TRANSPORTATION DEMAND MANAGEMENT

Please see the General Plan Circulation Element Transportation Demand Management section for additional information.

Vehicles are an essential part of life in California. People use them to go to work, run errands and transport goods all across the state and nation. However, while they serve a valuable function, many streets and freeways are increasingly overburdened with traffic. Everyday, cars and trucks jam onto the freeway at the beginning and end of each workday. Inching along the average twenty-two mile commute for Riverside County residents, automobiles spew pollutants into the air, while long sunny days change these pollutants into other noxious compounds. Most cars carry a single occupant, adding to the congestion and smog. When traffic does move, accidents often involving large trucks bring traffic to a grinding halt.

The good news is that our commute times and distance traveled to and from work have been stable over the last decade. The bad news is that Riverside County residents drive the furthest distance and have some of the longest commute times in all of southern California (Tables AQ-4, AQ-5 and AQ-6).

Policies:

AQ 7.1 Provide incentives to encourage new firms to locate within the County and existing firms to expand operations. (AI 18)

AQ 7.2 Work with SCAQMD and MDAQMD to develop a means to encourage the location of new commercial and industrial development in those localities where jobs are most needed. (AI 18)

AQ 7.3 Create a loan program to encourage small businesses to locate within the County. (AI 18)

AQ 7.4 Offer incentives to businesses to control emissions and implement the AQMP. (AI 18)

AQ 7.5 Reduce regulations on small businesses wherever possible and thereby encourage small business development and job creation. The County shall set performance standards as well as design standards, thus giving small business owners as many options as possible to comply with County regulations. (AI 18)

AQ 7.6 Adopt policies freeing small businesses from unnecessary and duplicative paperwork. (AI 18)

AQ 7.7 Assemble information collected from County agencies and departments concerning the business community to develop programs that better serve their needs. (AI 18)

Jobs-to-Housing Ratio

One of the challenges facing the County is to provide the appropriate quantity of residential and employment-generating uses within close proximity to each other in order to reduce the amount of vehicle miles traveled and minimize impacts on air quality. In addition to providing incentives for businesses to locate within Riverside County, it is important to consider the jobs-to-housing ratio when approving the construction of new developments, including the use of mixed-use land patterns and the placement of new public facilities.

Policies:

AQ 8.1 Locate new public facilities in job-poor areas of the County. (AI 18)

AQ 8.2 Emphasize job creation and reductions in vehicle miles traveled in job-poor areas to improve air quality over other less efficient methods. (AI 18)

AQ 8.3 Time and locate public facilities and services so that they further enhance job creation opportunities. (AI 18)

AQ 8.4 Support new mixed-use land use patterns and community centers which encourage community self-sufficiency and containment, and discourage automobile dependency. (AI 14)

Table AQ-3
Home County by Work County

	Home County					
Work County	**Los Angeles**	**Orange**	**Riverside**	**San Bernardino**	**Ventura**	**Imperial**
Los Angeles	90%	17%	8%	16%	18%	0%
Orange	6	79	10	7	0	0
Riverside	**0**	**0**	**68**	**9**	**0**	**1**
San Bernardino	2	2	8	68	0	0
Ventura	2	0	1	0	80	1
San Diego	0	1	4	0	1	1
Imperial	0	0	1	0	0	97

Source: 1999 SCAG State of the Commute Report

Education and Job Training

To stay competitive, the business community requires an educated and trained work force. While County residents are among the most talented and skilled in southern California, job training and education programs should be provided as an incentive for businesses to locate within the County. This will help ensure residents are trained and qualified to meet the specific needs of the business community.

Policies:

AQ 6.1 Assist small businesses by developing education and job training programs, especially in job-poor areas. (AI 124)

AQ 6.2 Collaborate with local colleges and universities to develop appropriate educational programs to assist residents in obtaining job skills to meet market demands.

Business Development

To the extent possible, the Air Quality Element will be an economic development program designed to enhance employment opportunities in Riverside County. Attempts to improve air quality should not prevent business development, especially within job-poor areas. In fact, business development should be identified as a critical factor in increasing air quality. Increasing employment opportunities within the County will allow residents to obtain jobs locally and decrease commute times. Decreased commute times mean less time spent in air polluting vehicles.

AQ 5.3 Update, when necessary, the County's Policy Manual for Energy Conservation to reflect revisions to the County Energy Conservation Program.

AQ 5.4 Encourage the incorporation of energy-efficient design elements, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling.

JOBS AND HOUSING

Imagine commuting in the morning and driving only a few short miles to work. There would be no commutes over an hour, no crowded freeways that resemble parking lots and no fighting traffic. This is the life of people who live near work. And as more residents are able to live and work within the County, this will be the commuting pattern of most residents. This will save fuel, ease congestion, speed traffic, cut emissions and improve air quality. However, if nothing is done, the risks are great. SCAG predicts that by the year 2010 commutes between Riverside County and Los Angeles County may increase by 600% over 2000 levels.

Part of the solution to the region's air quality problems is a better jobs-to-housing ratio. The objective of the jobs to housing ratio concept is to reduce Vehicle Miles Traveled (VMT) by locating jobs and housing closer together. In the ideal situation, the appropriate number of housing units in various income categories are provided to house the County's workforce. While this does not ensure that residents will live and work within Riverside County, the likelihood of it occurring does increase.

As stated in the General Plan Housing Element, traffic patterns on the major east-west transportation routes indicate that Riverside County serves as a bedroom community that supplies approximately 18% of the labor pool for the Los Angeles-Orange County metropolitan area (Table AQ-3, Home County by Work County). Statistics for 1990 to 2000 show that Riverside County's jobs-household ratio is slowly improving, however, from 0.80 jobs per household in 1990 to 0.90 in 1997 and 0.94 in 2000. The unincorporated area shows a severe shortage of jobs, however, with only 0.48 jobs per household in the western County and 0.26 jobs per household in the eastern County in 1997. This is the reverse of the jobs to housing ratio experienced in Los Angeles and Orange Counties where there were approximately 1.46 and 1.52 jobs per household respectively in the year 2000.

A "household" consists of all the people occupying a dwelling unit, whether or not they are related.

Whenever possible, the County should offer incentives to businesses and individuals to control emissions and implement the AQMP. In job-poor areas, the County should stress job creation and reductions in vehicle miles traveled to improve air quality over other less efficient methods. Among the positive approaches available to the County to encourage job creation in job-poor areas are: education; job training and placement services; technical assistance to incoming businesses; reducing regulation and paperwork on businesses; fast-tracking and fee waivers; and low interest loans.

AQ 4.3 Encourage centrally heated facilities to utilize automated time clocks or occupant sensors to control heating.

AQ 4.4 Require residential building construction to comply with energy use guidelines detailed in Title 24 of the California Administrative Code.

AQ 4.5 Require stationary pollution sources to minimize the release of toxic pollutants through:

- Design features;
- Operating procedures;
- Preventive maintenance;
- Operator training; and
- Emergency response planning

AQ 4.6 Require stationary air pollution sources to comply with applicable air district rules and control measures.

AQ 4.7 To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, MDAQMD, SOCAB, the Environmental Protection Agency and the California Air Resources Board.

AQ 4.8 Expand, as appropriate, measures contained in the County's Fugitive Dust Reduction Program for the Coachella Valley to the entire County.

AQ 4.9 Require compliance with SCAQMD Rules 403 and 403.1, and support appropriate future measures to reduce fugitive dust emanating from construction sites.

AQ 4.10 Coordinate with the SCAQMD and MDAQMD to create a communications plan to alert those conducting grading operations in the County of first, second, and third stage smog alerts, and when wind speeds exceed 25 miles per hour. During these instances all grading operations should be suspended. (AI 111)

Energy Efficiency and Conservation

Recycling and conservation efforts established and encouraged by the County can reduce the amount of pollutants emitted within the County. Efforts to recycle wastes can reduce the amount of pollutants emitted from the production of new materials while preserving raw materials. Conservation measures minimize the impacts of not only the consumption of, but also the production of energy sources.

Policies

AQ 5.1 Utilize source reduction, recycling and other appropriate measures to reduce the amount of solid waste disposed of in landfills.

AQ 5.2 Adopt incentives and/or regulations to enact energy conservation requirements for private and public developments. (AI 62)

AQ 2.3 Encourage the use of pollution control measures such as landscaping, vegetation and other materials, which trap particulate matter or control pollution. (AI 114)

AQ 2.4 Consider creating a program to plant urban trees on an Area Plan basis that removes pollutants from the air, provides shade and decreases the negative impacts of heat on the air. (AI 114)

Mobile Pollution Sources

Mobile sources are subdivided into two categories: on-road (generally motorized vehicles like automobiles, motorcylces and trucks) and non-road sources (trains, boats, jet skis and all-terrain vehicles). The County's land use distribution, proximity to Orange and Los Angeles Counties, and subsequent auto-generated traffic have had a tremendously detrimental impact on air quality. Vehicle miles traveled (VMT) have doubled over the past 20 years, with mobile pollution sources constituting approximately 60% of air pollution in the region.

Transportation Management Associations *- Non Profit organizations formed so that employers, developers, building owners, local government representatives, and others can work together and collectively establish policies, programs, and services to address local transportation problems.*

Policies:

AQ 3.1 Allow the market place, as much as possible, to determine the most economical approach to relieve congestion and cut emissions.

AQ 3.2 Seek new cooperative relationships between employers and employees to reduce vehicle miles traveled.

AQ 3.3 Encourage large employers and commercial/industrial complexes to create Transportation Management Associations. (AI 115)

AQ 3.4 Encourage employee rideshare and transit incentives for employers with more than 25 employees at a single location.

Stationary Pollution Sources

Stationary pollution sources are generally divided into two subcategories for analysis: point sources (such as power plants and refinery boilers) and area sources (including small emission sources such as residential water heaters and architectural coatings). Agricultural and industrial land uses are generally the main stationary pollution sources in Riverside County, though most urbanized land areas and their associated activities also contribute to poor air quality in the region. While industrial sources are addressed here, agricultural source impacts, due to their primary emissions of PM_{10}, are addressed in the Particulate Matter section of this element.

Policies:

AQ 4.1 Encourage the use of building materials/methods which reduce emissions.

AQ 4.2 Encourage the use of efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces and boiler units.

AQ 1.4 Coordinate with the SCAQMD and MDAQMD to ensure that all elements of air quality plans regarding reduction of air pollutant emissions are being enforced. (AI 111)

AQ 1.5 Establish and implement air quality, land use and circulation measures that improve not only the County's environment but the entire region's. (AI 111)

AQ 1.6 Establish a level playing field by working with local jurisdictions to simultaneously adopt policies similar to those in this Air Quality Element

AQ 1.7 Support legislation which promotes cleaner industry, clean fuel vehicles and more efficient burning engines and fuels. (AI 113)

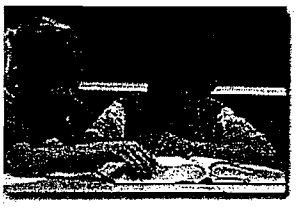
AQ 1.8 Support the introduction of federal, state or regional enabling legislation to permit the County to promote inventive air quality programs, which otherwise could not be implemented. (AI 113)

AQ 1.9 Encourage, publicly recognize and reward innovative approaches that improve air quality. (AI 113)

AQ 1.10 Work with regional and local agencies to evaluate the feasibility of implementing a system of charges (e.g., pollution charges, user fees, congestion pricing and toll roads) that requires individuals who undertake polluting activities to bear the economic cost of their actions where possible. (AI 111)

AQ 1.11 Involve environmental groups, the business community, special interests, and the general public in the formulation and implementation of programs that effectively reduce airborne pollutants.

Sensitive Receptors



Children may suffer from asthma or other chronic diseases as a result of exposure to polluted air.

Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e. children, elderly and the sick) and to certain at-risk sensitive land uses such as schools, hospitals, parks, or residential communities. The intent of the following policies is to reduce the negative impacts of poor air quality on the County's sensitive receptors.

Policies:

AQ 2.1 The County land use planning efforts shall assure that sensitive receptors are separated and protected from polluting point sources to the greatest extent possible. (AI 114)

AQ 2.2 Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible. (AI 114)

matter. Seniors, people with pre-existing respiratory and/or cardiovascular disease and children appear to be more susceptible to the effects of PM_{10} and $PM_{2.5}$.

Carbon Monoxide (CO)

Carbon monoxide replaces oxygen in the body's red blood cells. Individuals with a deficient blood supply to the heart, patients with diseases involving heart and blood vessels, fetuses (unborn babies), and patients with chronic hypoxemia (oxygen deficiency) as seen in high altitudes are the most susceptible to the adverse effects of CO exposure. People with heart disease are also more susceptible to developing chest pains when exposed to low levels of carbon monoxide. Exposure to high levels of carbon monoxide can slow reflexes and cause drowsiness, and result in death in confined spaces at very high concentrations.

Reduction in birth weight and impaired neurobehavioral development has been observed in animals chronically exposed to CO resulting in carboxyhemoglobin levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels. These include pre-term births and heart abnormalities. Additional research is needed to confirm these results.

Nitrogen Dioxide (NO_2)

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposures to NO_2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy individuals. Larger decreases in lung functions are observed in individuals with asthma and/or chronic obstructive pulmonary disease (e.g. chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.

In animals, exposure to levels of NO_2 considerably higher than ambient concentrations results in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of ozone exposure increases when animals are exposed to a combination of ozone and NO_2.

Sulfur Dioxide (SO_2)

Exposure of a few minutes to low levels of SO_2 can result in airway constriction in some asthmatics. All asthmatics are sensitive to the effects of SO_2. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2. Animal studies suggest that despite being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high

levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

Sulfates

Most of the health effects associated with fine particles and sulfur dioxide at ambient levels are also associated with sulfates. Thus, both mortality and morbidity effects have been observed with an increase in ambient sulfate concentrations. However, efforts to separate the effects of sulfates from the effects of other pollutants have generally not been successful. Clinical studies of asthmatics exposed to sulfuric acid suggest that adolescent asthmatics are possibly a subgroup susceptible to acid aerosol exposure. Animal studies suggest that acidic particles such as sulfuric acid aerosol and ammonium bisulfate are more toxic than non-acidic particles like ammonium sulfate. Whether the effects are attributable to acidity or to particles remains unresolved.

Lead

Fetuses, infants, and children are more sensitive than others to the adverse effects of lead exposure. Exposure to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure. Lead poisoning can cause anemia, lethargy, seizures and death. It appears that there are no direct effects of lead on the respiratory system. Lead can be stored in the bone from early-age environmental exposure, and elevated blood lead levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of lead because of previous environmental lead exposure of their mothers.

APPENDIX D

COACHELLA VALLEY

MODEL DUST CONTROL ORDINANCE

Section 100 Purpose

The purpose of this ordinance is to establish minimum requirements for construction and demolition activities and other specified sources in order to reduce man-made fugitive dust and the corresponding PM10 emissions.

Section 200 Definitions

For the purpose of this ordinance, the following definitions are applicable:

1 AGRICULTURAL OPERATIONS are any operation directly related to the growing of crops, or raising of fowls or animals for the primary purpose of making a livelihood.

2 AQMD is the South Coast Air Quality Management District and the representatives thereof.

3 AVERAGE DAILY TRAFFIC (ADT) is the number of motor vehicles that traverse a given unpaved or paved surface during a specified 24-hour period. ADT levels are calculated as the average daily volume over a specified 48-hour period as determined by the City (County) in consultation with the AQMD.

4 BULK MATERIAL is all sand, gravel, soil, aggregate and other organic and inorganic particulate matter.

5 CHEMICAL DUST SUPPRESSANTS are non-toxic chemical soil binders that are not prohibited for use by the City (County), the California Regional Water Quality Control Board, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any other law, rule or regulation, used to reduce dust on disturbed surfaces.

6 COACHELLA VALLEY BEST AVAILABLE CONTROL MEASURES (CV BACM) are methods to prevent or mitigate the emission and/or airborne transport of fugitive dust, as identified in the Coachella Valley Fugitive Dust Control Handbook.

7 COACHELLA VALLEY FUGITIVE DUST CONTROL HANDBOOK is the most recently approved reference document by the AQMD that includes a description of fugitive dust control measures, guidance for preparation of Fugitive Dust Control Plans, notification forms, signage provisions, and test methods.

8 CONSTRUCTION ACTIVITIES are any on-site activities preparatory to or related to the building, alteration, rehabilitation, or improvement of property, including, but not limited to the following activities; grading, excavation, trenching, loading, vehicular travel, crushing, blasting, cutting, planning, shaping, breaking, equipment staging/storage areas, weed abatement activities or adding or removing bulk materials from storage piles.

9 DEMOLITION ACTIVITIES are the wrecking or taking out of any load-supporting structural member of a structure or building and related handling operations or the intentional burning of any structure or building.

10 DISTURBED SURFACE AREA is any portion of the earth's surface (or material placed thereupon) that has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed native condition (including vehicular disturbances) thereby increasing the potential for the emission of fugitive dust. This definition does not include land that has been restored to a native condition, such that the vegetative ground cover and soil characteristics are equal to surrounding native conditions.

11 EARTH-MOVING OPERATIONS are the use of any equipment for an activity where soil is being moved or uncovered.

12 FINISH GRADE is the final grade of the site that conforms to the approved grading plan.

13 FUGITIVE DUST is any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of human activities. PM10 is a subset of fugitive dust and is defined as particulate matter with an aerodynamic diameter of 10 microns or less.

14 FUGITIVE DUST CONTROL PLAN is a document that describes fugitive dust sources at a site and the corresponding control measures and is prepared in accordance with the guidance contained in the Coachella Valley Fugitive Dust Control Handbook.

15 HIGH-WIND EPISODE is when wind speeds exceed 25 miles per hour as measured by:

A. the closest AQMD monitoring station, or
B. a certified meteorological monitoring station, or
C. an on-site wind monitor calibrated and operated on-site in accordance with the manufacturer's specifications with a data logger or strip chart.

16 OPERATOR is any person who owns, leases, operates, controls, or supervises any potential fugitive dust generating operation subject to the requirements of this ordinance. This definition includes any person who has been officially designated by a property owner as the person responsible for fugitive dust control at a site, as indicated in an approved Fugitive Dust Control Plan.

17 PAVED ROAD is an improved street, highway, alley, public way, or easement that is covered by roadway materials (e.g., cement, asphalt or asphaltic concrete).

18 PHYSICAL ACCESS RESTRICTION is any barrier, including but not limited to; curbs, fences, gates, posts with fencing, shrubs, trees, or other measures that are effective in preventing vehicular and Off-Highway Vehicle (OHV) use of a specified site.

19 SILT is any bulk material with a particle size less than 75 micrometers in diameter that passes through a Number 200 sieve as determined by American Society of Testing and Materials (ASTM) Test Method C 136 or any other test method approved by the U.S. EPA and AQMD.

20 SITE is the real property on which construction, demolition, or other activities subject to this ordinance may occur.

21 STABILIZED SURFACE is any portion of land that meets the minimum standards as established by the applicable test method contained in the Coachella Valley Fugitive Dust Control Handbook.

22 STORAGE PILE is any accumulation of bulk material with a height of three feet or more and a total surface area of 300 or more square feet.

23 UNPAVED PARKING LOT is an area utilized for parking vehicles and associated vehicle maneuvering that is not covered with roadway materials (e.g., cement, asphalt or asphaltic concrete).

24 UNPAVED ROAD is any service roads, internal access roads, heavy and light duty equipment paths and other roadways which are not covered by typical roadway materials (e.g., cement, asphalt, asphaltic concrete).

25 TEMPORARY UNPAVED PARKING LOTS are those used less than 24 days per year.

Section 300 Performance Standards and Test Methods

All performance standards and test methods referenced in this ordinance shall be based on the methodologies included in the Coachella Valley Dust Control Handbook.

Section 400 Control Requirements

410. Work Practices – All Fugitive Dust Sources

1 No operator shall conduct any potential dust-generating activity on a site unless the operator utilizes one or more Coachella Valley Best Available Control Measures, as identified in the Coachella Valley Fugitive Dust Control Handbook for each fugitive dust source such that the applicable performance standards are met.

2 Any operator involved in any potential dust-generating activity on a site with a disturbed surface area greater than one acre shall, at a minimum, operate a water application system as identified in the Coachella Valley Fugitive Dust Control Handbook, if watering is the selected control measure.

Performance Standards and Test Methods

3 No person subject to the requirements contained in Section 410.1 shall cause or allow visible fugitive dust emissions to exceed 20 percent opacity, or extend more than 100 feet either horizontally or vertically from the origin of a source, or cross any property line.

420. Construction and Demolition Activities

1 Any operator applying for a grading permit, or a building permit for an activity with a disturbed surface area of more than 5,000 square feet, shall not initiate any earth-moving operations unless a Fugitive Dust Control Plan has been

prepared pursuant to the provisions of the Coachella Valley Fugitive Dust Control Handbook and approved by the City (County).

2 A complete copy of the approved Fugitive Dust Control Plan must be kept on site in a conspicuous place at all times and provided to the City (County) and AQMD upon request.

3 Any operator involved in demolition activities shall comply with AQMD Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities) requirements, and the requirements of Title 40, Part 61 of the code of Federal Regulations.

4 Any operator involved in earth-moving operations shall implement at least one of the following short-term stabilization methods during non-working hours:
   A. maintaining soils in a damp condition as determined by sight or touch; or
   B. establishment of a stabilized surface through watering; or
   C. application of a chemical dust suppressant in sufficient quantities and concentrations to maintain a stabilized surface.

5 Within 10 days of ceasing activity, an operator shall implement at least one of the following long-term stabilization techniques for any disturbed surface area where construction activities are not scheduled to occur for at least 30 days:
   A. revegetation that results in 75 percent ground coverage provided that an active watering system is in place at all times; or
   B. establishment of a stabilized surface through watering with physical access restriction surrounding the area; or
   C. use of chemical stabilizers to establish a stabilized surface with physical access restriction surrounding the area.

6 Any operator shall remove all bulk material track-out from any site access point onto any paved road open to through traffic:
   A. within one hour if such material extends for a cumulative distance of greater than 25 feet from any site access point; and
   B. at the conclusion of each workday.

7 Any operator of a project with a disturbed surface area of five or more acres or of any project that involves the import or export of at least 100 cubic yards of bulk material per day shall install and maintain at least one of the following control measures at the intersection of each site entrance and any paved road open to through traffic with all vehicles exiting the site routed over the selected device(s):
   A. pad consisting of minimum one inch washed gravel maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long; or
   B. paved surface extending at least 100 feet and at least 20 feet wide; or
   C. wheel shaker / wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least three inches tall and at least six inches apart and 20 feet long; or

D. a wheel washing system.

8 Any operator required to submit a Fugitive Dust Control Plan under Section 420.1 shall install and maintain project contact signage that meets the minimum standards of the Coachella Valley Fugitive Dust Control Handbook, including a 24-hour manned toll-free or local phone number, prior to initiating any type of earth-moving operations.

9 Any operator of a project with a disturbed surface area of 50 or more acres shall have an Environmental Observer on the site or available on-site within 30 minutes of initial contact that:

A. is hired by the property owner or developer; and
B. has dust control as the sole or primary responsibility; and
C. has successfully completed the AQMD Coachella Valley Fugitive Dust Control Class and has been issued a Certificate of Completion for the class; and
D. is identified in the approved Fugitive Dust Control Plan as having the authority to immediately employ sufficient dust mitigation 24-hours per day, seven days a week and to ensure compliance with this ordinance, the approved Fugitive Dust Control Plan, and AQMD regulations.

Performance Standards and Test Methods

10 No operator required to submit a Fugitive Dust Control Plan under Section 420.1 shall cause or allow visible fugitive dust emissions to exceed 20 percent opacity, or extend more than 100 feet either horizontally or vertically from the origin of a source, or cross any property line.

11 Exceedance of the visible emissions prohibition in Section 420.10 occurring due to a high-wind episode shall constitute a violation of Section 420.10, unless the operator demonstrates to City (County) all the following conditions:

A. all Fugitive Dust Control Plan measures or applicable Coachella Valley Best Available Control Measures were implemented and maintained on site; and
B. the exceedance could not have been prevented by better application, implementation, operation, or maintenance of control measures; and
C. appropriate recordkeeping was complied and retained in accordance with the requirements in Section 420.12 through 420.15; and
D. documentation of the high-wind episode on the day(s) in question is provided by appropriate records.

Reporting / Recordkeeping

Before Construction

12 The operator of a project with ten acres or more of earth-moving operations shall:

A. forward two copies of a Site-Specific, Stand Alone [8½ by 11 inch] Fugitive Dust Control Plan to the AQMD within ten days after approval by the City (County). [Note: A separate AQMD approval will not be issued]; and
B. notify the City (County) and the AQMD at least 24-hours prior to initiating earth-moving operations.

During Construction

13 Any operator involved in earth-moving operations shall compile, and maintain for a period of not less than three years, daily self-inspection recordkeeping forms in accordance with the guidelines contained in the Coachella Valley Fugitive Dust Control Handbook.

14 Any operator involved in earth-moving operations that utilizes chemical dust suppressants for dust control on a site shall compile records indicating the type of product applied, vendor name, and the method, frequency, concentration, quantity and date(s) of application and shall retain such records for a period of not less than three years.

After Construction

15 Any operator subject to the provisions of Section 420.12 shall notify the City (County) and the AQMD within ten days of the establishment of the finish grade or at the conclusion of the finished grading inspection.

430. Disturbed Vacant Lands / Weed Abatement Activities

1 Owners of property with a disturbed surface area greater than 5,000 square feet shall within 30 days of receiving official notice by the City (County) prevent trespass through physical access restriction as permitted by the City (County).

2 In the event that implementation of Section 430.1 is not effective in establishing a stabilized surface within 45 days of restricting access, the owner shall implement at least one of the following long term stabilization techniques within an additional 15 days, unless the City (County) has determined that the land has been restabilized:
A. uniformly apply and maintain surface gravel or chemical dust suppressants such that a stabilized surface is formed; or
B. begin restoring disturbed surfaces such that the vegetative cover and soil characteristics are similar to adjacent or nearby undisturbed native conditions. Such restoration control measure(s) must be maintained and reapplied, if necessary, such that a stabilized surface is formed within 8 months of the initial application.

3 Any operator conducting weed abatement activities on a site that results in a disturbed surface area of 5,000 or more square feet shall:
A. apply sufficient water before and during weed abatement activities such that the applicable performance standards are met; and

B. ensure that the affected area is a stabilized surface once weed abatement activities have ceased.

Performance Standards and Test Methods

4 No person subject to the provisions of Sections 430.1 through 430.3 shall cause or allow visible fugitive dust emissions to exceed 20 percent opacity, or extend more than 100 feet either horizontally or vertically from a source, or cross any property line, and shall either:

A. maintain a stabilized surface; or

B. maintain a threshold friction velocity for disturbed surface areas corrected for non-erodible elements of 100 centimeters per second or higher.

Reporting / Recordkeeping

5 Within 90 days of ordinance adoption, operators of property with disturbed surface area of 5,000 or more square feet shall notify the City (County) of the location of such lands and provide owner contact information.

6 Any person subject to the provisions of Sections 430.1 through 403.3 shall compile, and retain for a period of not less than three years, records indicating the name and contact person of all firms contracted with for dust mitigation, listing of dust control implements used on-site, and invoices from dust suppressant contractors/vendors.

440. Unpaved Roads

1 Owners of private unpaved roads with average daily traffic levels between 20 and 150 vehicles must take measures (signage or speed control devices) to reduce vehicular speeds to no more than 15 miles per hour.

2 Owners of a cumulative distance of six or less miles of private unpaved roads shall pave each segment having 150 or more average daily trips or, alternatively apply and maintain chemical dust suppressants in accordance with the manufacturer's specifications for a travel surface and the performance standards included in Section 440.4 in accordance with the following treatment schedule:

A. one-third of qualifying unpaved road segments within one year of ordinance adoption; and

B. remainder of qualifying unpaved road segments within three years of ordinance adoption. (Note: treatments in excess of annual requirements can apply to future years.)

3 Owners of a cumulative distance of more than six miles of private unpaved roads shall stabilize each segment having 150 or more average daily trips in accordance with the following treatment schedule:

A. at least two miles paved or four miles stabilized with chemical dust suppressants in accordance with the manufacturer's specifications for a

travel surface and the performance standards established in Section 440.4 within one year of the ordinance adoption; and

B. at least two miles paved or four miles stabilized with chemical dust suppressants in accordance with the manufacturer's specifications for a travel surface and the performance standards included in Section 440.4 in accordance with the following treatment schedule annually thereafter until all qualifying unpaved roads have been stabilized. (Note: treatments in excess of annual requirements can apply to future years).

Performance Standards and Test Methods

4 Owners of any private unpaved road shall not allow visible fugitive dust emissions to exceed 20 percent opacity, or extend more than 100 feet either horizontally or vertically from the origin of a source, and shall either:

A. not allow silt loading to be equal to or greater than 0.33 ounces per square foot; or

B. not allow the silt content to exceed six percent.

Reporting / Recordkeeping

5 Within 90 days of ordinance adoption, owners of unpaved roads shall provide to the City (County) and the AQMD the location and ADT estimates for all unpaved roads.

6 Owners of unpaved roads that utilize chemical dust suppressants shall compile, and retain for a period of not less than three years, records indicating the type of product applied, vendor name, and the method, frequency, concentration, quantity and date(s) of application.

450. Unpaved Parking Lots

1 Owners of parking lots established subsequent to ordinance adoption are required to pave such areas, or alternatively apply and maintain chemical dust suppressants in accordance with the manufacturer's specifications for traffic areas and the performance standards included in Section 450.4.

2 Owners of existing private unpaved parking lots shall implement one of the following control strategies within 180 days of ordinance adoption:

A. pave; or

B. apply and maintain dust suppressants in accordance with the manufacturer's specifications for traffic areas and the performance standards included in Section 450.4;

C. apply and maintain washed gravel in accordance with the performance standards included in Section 450.4.

3 Owners of private temporary unpaved parking lots (those that are used 24 days or less per year) shall apply and maintain chemical dust suppressants in accordance with the manufacturer's specifications for traffic areas and the

performance standards included in Section 450.4 prior to any 24-hour period when more than 40 vehicles are expected to enter and park. The owner of any temporary unpaved parking lot greater than 5,000 square feet shall implement the disturbed vacant land requirements contained in Section 430 during non-parking periods.

Performance Standards and Test Methods

4 The operator of any private unpaved parking lot shall not allow visible fugitive dust emissions to exceed 20 percent opacity, or extend more than 100 feet either horizontally or vertically from the origin of a source, and shall either:

A. not allow silt loading to be equal to or greater than 0.33 ounces per square foot; or

B. not allow the silt content to exceed eight percent.

Reporting / Recordkeeping

5 Within 90 days of ordinance adoption, owners of unpaved parking lots shall provide to the City (County) and the AQMD the location and ADT estimates and the size (in square feet) of unpaved parking lots.

6 Owners of unpaved parking lots that utilize chemical dust suppressants or apply gravel shall compile, and retain for a period of not less than three years, records indicating the type of product applied, vendor name, and the method, frequency, concentration, quantity and date(s) of application.

460. Public or Private Paved Roads

1 Any owner of paved roads shall construct, or require to be constructed all new or widened paved roads in accordance with the following standards:

A. curbing in accordance with the American Association of State Highway and Transportation Officials guidelines or as an alternative, road shoulders paved or treated with chemical dust suppressants or washed gravel in accordance with the performance standards included in Section 440.4 with the following minimum widths:

Average Daily Trips	Minimum Shoulder Width
500 - 3,000	4 feet
3,000 or greater	8 feet

B. paved medians or as an alternative, medians surrounded by curbing and treated with landscaping, chemical dust suppressants, or washed gravel applied and maintained in accordance with the performance standards included in Section 440.4.

2 Any owner of public or private paved roads shall remove or cause to be removed any erosion-caused deposits of greater than 2,500 square feet within

24-hours after receiving notice by the City (County) or the AQMD or prior to resumption of traffic where the paved area has been closed to vehicular traffic.

Section 500 Administrative Requirements

1 Any operator preparing a Fugitive Dust Control Plan shall complete the AQMD Coachella Valley Fugitive Dust Control Class and maintain a current valid Certificate of Completion.

2 At least one representative of each construction or demolition general contractor and subcontractor responsible for earth-movement operations shall complete the AQMD Coachella Valley Fugitive Dust Control Class and maintain a current valid Certificate of Completion.

3 All reporting / recordkeeping required by Section 420 shall be provided to the City (County) and AQMD representatives immediately upon request.

4 All reporting / recordkeeping required by Section 430 through Section 460 shall be provided to the City (County) and AQMD representatives within 24-hours of a written request.

Section 600 Exemptions

1 The provisions of this ordinance shall not apply to:

A. agricultural operations including on-field sources and unpaved roads used solely for agricultural operations.

B. any dust-generating activity where necessary fugitive dust preventive or mitigative actions are in conflict with either federal or State Endangered Species Act provisions as determined in writing by the appropriate federal or state agency.

C. any action required or authorized to implement emergency operations that are officially declared by the City (County) to ensure the public health and safety.

2 The provisions of Section 420.1 shall not apply to any construction or demolition activity meeting any of the following activity levels or requirements:

A. the activity is occurring entirely within an enclosed structure from which no visible airborne particulate matter escapes; or

B. activities that do not require issuance of a grading permit or those that require a building permit provided that the project results in 5,000 or less square feet of soil disturbance.

3 The provisions of Section 420.8 shall not apply to:

A. projects that takes two weeks or less to complete provided that a long-term stabilization technique(s) identified in Section 430 are implemented; and

B. line projects (i.e., pipelines, cable access lines, etc.).

Compliance

1 A person violating any section of this ordinance or with any portion of an approved Dust Control Plan is guilty of an infraction punishable by a fine of not more than one hundred dollars ($100.00) for a first violation and a fine not exceeding four hundred dollars ($400.00) for a second violation within one year. A third violation, or more, within one year shall each be prosecuted at a level consistent with a misdemeanor violation.

2 In addition to any other remedy provided by law, failure to correct any condition indicated in a notice of violation within one hour of issuance will allow the City (County) to initiate one or more of the following actions where appropriate:

- A Criminal proceedings.
- B Civil proceedings to obtain an injunction; or any other relief against the owner or operator to stop operations at the site.
- C Refusal to issue future permits and/or release of securities held until owner or operator has adequately demonstrated compliance with the notice of violation.
- D Correction of the condition by the City (County) through the use of any securities held under this ordinance.

APPENDIX E

FUNDING RESOURCES AVAILABLE

TO LOCAL JURISDICTIONS

TO SUPPORT

THE IMPLEMENTATION OF SUGGESTED POLICIES/STRATEGIES

FUNDING RESOURCES AVAILABLE TO LOCAL JURISDICTIONS TO SUPPORT THE IMPLEMENTATION OF SUGGESTED POLICIES/STRATEGIES

AB2766 Subvention Fund. Cities within the jurisdiction of the South Coast Air Quality Management District (AQMD) receive a portion of the fees charged to register motor vehicles. AQMD disburses this fund to the cities on a quarterly basis. The revenue must be used to fund projects and programs that *reduce emissions from mobile sources*. Additional revenue is available to match AB2766 subvention funding for certain types of expenditures from the Mobile Source Air Pollution Reduction Review Committee's (MSRC) AB2766 Local Government Match Program. A separate application is required for the MSRC matching fund.

Contact: South Coast AQMD
Transportation Programs
(909) 396-3271
Website: www.aqmd.gov/Business/Transportation/AB2766SubventionFunding

AQMD Financial Assistance for Small Business. Small businesses that are planning to purchase air pollution control equipment may apply for a loan guarantee under the California Capital Access Program (CalCAP). The program guarantees the repayment of your loan and motivates banks and other lenders to offer loans to small businesses for pollution control equipment. Guarantees are available for loans from $15,000 to $250,000 and may be up to 90 percent of the loan amount. To be eligible for assistance, a business must be subject to AQMD rules and regulations and must meet the definition of small business set by the U.S. Small Business Administration (typically less than 500 employees and $5 million annual gross revenue).

Contact: South Coast AQMD
Public Affairs
1-800-CUT-SMOG
Website: www.aqmd.gov/Business/Financial Assistance

AQMD Lower Emission School Bus Program. AQMD requires public schools and private operators with more than 15 or more school buses to purchase or lease cleaner buses to protect children from exposure to toxic diesel emissions. AQMD grants are available to public school districts for the *purchase of clean school buses* (e.g. compressed natural gas or low-emitting diesel), and for the retrofit of diesel buses with

particulate traps. To qualify for grants to purchase new buses, school districts agree to retire an equivalent number of the oldest, most polluting buses in the district's fleet. Funds are first distributed in proportion to the number of residents within each county. School Districts in LA county receive about 61 percent, Orange county - 18 percent, San Bernardino county - 11 percent, and Riverside receives - 10 percent. LA Unified School District is restricted to a maximum of 50 percent of the total funds distributed to LA County. Additional funding criteria apply.

Contact: South Coast AQMD
Technology Advancement Office
(909) 396-3331
Website: www.aqmd.gov/Education/CleanAirTechnologies/Implementation/SchoolBusProgram

Carl Moyer Memorial Air Quality Standards Attainment Program. The state legislature created this funding program to develop state air quality measures. The Carl Moyer program is designed to facilitate the introduction and use of low-emission, heavy-duty engines. Funds may be used to help purchase or repower new vehicles. New vehicles and equipment must achieve a 30 percent reduction of NO_x emissions compared to current emission standards. Alternative fuel engines, (e.g. compressed natural gas, liquefied natural gas, propane and electricity) will be given preference for funding. However, cleaner diesel engines may be considered in the off-road category if a CARB-certified alternative fuel engine is not available for a specific application. Vehicles and equipment must remain in operation for at least five years, and 75 percent of their use must be within the South Coast basin.

Contacts: South Coast AQMD
Technology Advancement Office
On-Road, Off-Road, Locomotive, Construction
(909) 396-3331
Website: www.aqmd.gov/Education/CleanAirTechnologies/Implementation/CarlMoyerProgram

Congestion Mitigation and Air Quality Improvement (CMAQ) Program. This program is implemented by the local transportation commissions or metropolitan planning organization. Funding is available for transit improvement projects and alternative fuels.

Website: www.fhwa.dot.gov/environment/cmaq.htm

Mobile Source Air Pollution Reduction Review Committee (MSRC) – Competitive Grants. The discretionary funds are to be used for clean air projects that results in direct and tangible reductions in air pollution from vehicles within the South Coast Air District. Project categories include clean fuel vehicles, alternative fuel infrastructure, transportation control measures; such as ridesharing telecommuting,

videoconferencing, parking management, traffic synchronization and research and development of new clean air technologies, as well as educational projects.

Contacts: South Coast AQMD
info@msrc-cleanair.org
Website: www.msrc-cleanair.org

MSRC – Local Government Match Program. This program provides matching funding against local funds for investments such as alternative fuel infrastructure and vehicles. Local governments such as cities and counties are eligible to apply for funding. Historically, project categories include clean fuel vehicles, alternative fuel infrastructure, and transportation.

Contacts: South Coast AQMD
info@msrc-cleanair.org
Website: www.msrc-cleanair.org

Rule 2202 Air Quality Investment Program (AQIP). AQMD requires employers with over 250 employees to reduce emissions from employee commute trips. One option available to employers under Rule 2202 is to invest in the AQMD's Air Quality Investment Program (AQIP) in lieu of implementing other rule requirements. AQIP revenue is placed in a restricted fund to be used to reduce emissions to mitigate the impacts of not participating in an employee commute reduction program. The objective of the program is to use the AQIP fund to reduce emissions to levels that are equivalent to levels that would have been achieved if the employer had implemented other strategies in the rule. The AQMD accepts emission reduction proposals and awards contracts on a bi-annual basis. Qualified AQIP proposals may include the purchase of clean on-road and off-road vehicles, and projects that enhance mobility (e.g. shuttle services).

Contacts: South Coast AQMD
Technology Advancement Office (909) 396-3331
Website: www.aqmd.gov/Education/CleanAirTechnologies/
Implementation/Rule2202AirQualityInvestmentProgram

Sempra Energy. Rebates, grants and loans are available until funding is depleted. *Flex Your Power's* website is a great resource for energy efficiency and conservation information. Incentives/rebates, technical assistance, retailers, product guides, case studies and more are found on this website.

Website: www.fypower.org

U.S. Department of Energy (U.S.DOE)-Clean Cities Program. The United States Department of Energy (DOE) established the Clean Cities Program as a locally based public/private alliance to expand the use of alternative fuels to gasoline and diesel fuel. By combining local decision-making with voluntary action by partners, the grassroots

approach of Clean Cities departs from traditional top-down federal programs. It creates an effective plan carried out at the local level for creating a sustainable nationwide alternative fuels market.

Contacts: US DOE
Roxanne.deppsy@ee.doe.gov
(206) 553-2155
California Energy Commission (CEC)
pward@energy.state.ca.us
(916) 654-4639
Website: www.eere.energy.gov/cleancities